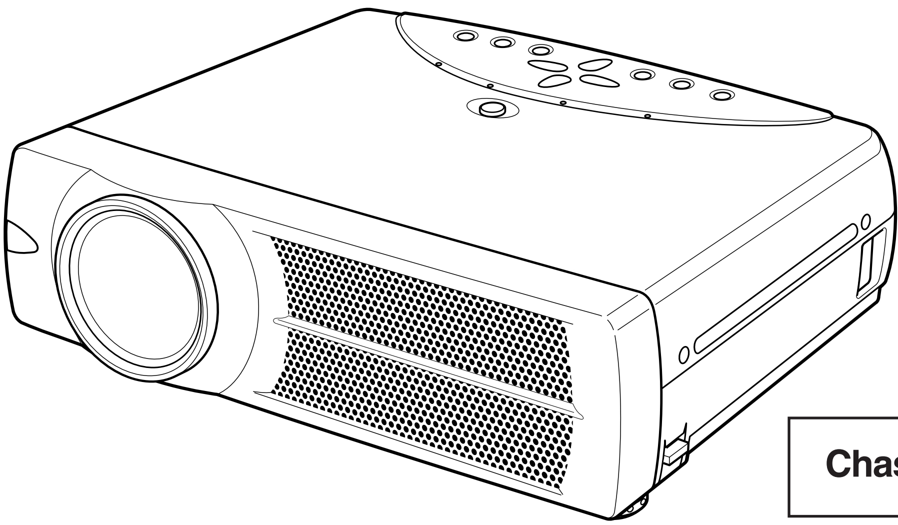
SERVICE MANUAL

SERVICE MANUAL

BOXLIGHT CP-320t

ORIGINAL VERSION



Chassis No. MA3-CP-320t00

NOTE: Match the Chassis No. on the unit's back cover with the Chassis No. in the Service Manual.

If the Original Version Service Manual Chassis No. does not match the unit's, additional Service Literature is required. You must refer to "Notices" to the Original Service Manual prior to servicing the unit.

BOXLIGHT®
Presenting a Better Way

PRODUCT CODE
1 122 157 04 (MA3E)

REFERENCE NO. SM5110523-00

■ Contents

Drawings & Diagrams

■ Safety Instructions

SAFETY PRECAUTIONS

WARNING:
The chassis of this projector is isolated (COLD) from AC line by using the converter transformer. Primary side of the converter and lamp power supply unit circuit is connected to the AC line and it is hot, which hot circuit is identified with the line (   ) in the schematic diagram. For continued product safety and protection of personnel injury, servicing should be made with qualified personnel.

The following precautions must be observed.

1: An isolation transformer should be connected in the power line between the projector and the AC line before any service is performed on the projector.

2: Comply with all caution and safety-related notes provided on the cabinet back, cabinet bottom, inside the cabinet or on the chassis.

3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, etc.

DO NOT OPERATE THIS PROJECTOR WITHOUT THE PROTECTIVE SHIELD IN POSITION AND PROPERLY SECURED.

4: Before replacing the cabinet cover, thoroughly inspect the inside of the cabinet to see that no stray parts or tools have been left inside.

Before returning any projector to the customer, the service personnel must be sure it is completely safe to operate without danger of electric shock.

PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of the projector. Components indicated by mark ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. It is, therefore, particularly recommended that the replacement of there parts must be made by exactly the same parts.

SERVICE PERSONNEL WARNING

Eye damage may result from directly viewing the light produced by the Lamp used in this equipment. Always turn off Lamp before opening cover. The Ultraviolet radiation eye protection required during this servicing.
Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages(15kV - 25kV) at its starts.
Since the lamp is very high temperature during units operation replacement of the lamp should be done at least 45 minutes after the power has been turned off, to allow the lamp cool-off.

DO NOT ATTEMPT TO SERVICING THE REMOTE CONTROL UNIT.

Laser Beam may be leaked out when in disassemble the Unit. As the Laser Beam used in this Remote control unit is harmful to the eyes.

CAUTION

LASER RADIATION
DO NOT STARE INTO BEAM
MAX. OUTPUT: 1mW
WAVE LENGTH: 650±20nm
CLASS II LASER PRODUCT
This product is complied with 21 CFR part 1040.10

LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT
LASER-STRAHLING
NICHT IN DEN STRAHL BLICKEN
LASER KLASSE 2
レーザ放射クラス2レーザ製品
ビームをのぞき込まないこと
IEC60825-1, Am. 1 1997
MAX OUTPUT (最大出力) : 1 mW
WAVE LENGTH (波長) : 650±20nm

■ Specifications

Projector Type	Multi-media Projector
Dimensions (W x H x D)	13.11” x 3.52” x 9.96” (333mm x 89.5mm x 253mm)
Net Weight	9.5 lbs (4.3 kg)
LCD Panel System	0.8” TFT Active Matrix type, 3 panels
Panel Resolution	1024 x 768 dots
Number of Pixels	2,359,296 (1024 x 768 x 3 panels)
Color System	6 color system (PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N)
High Definition TV SIgnals	480i, 480p, 575i, 575p, 720p. 1035i and 1080i
Scanning Frequency	H-sync. 15 ~ 100kHz, V-sync. 50 ~ 100Hz
Projection Image Size (diagonal)	Adjustable from 36” to 260”
Projection Lens	F 1.9 ~ 2.1 lens with f 21.3mm ~ 25.6mm with motor zoom and focus
Throw Distance	3.6’ ~ 22.6’ (1.1m ~ 6.9m)
Projection Lamp	180watts
AV Input Jacks	RCA Type x 3 (Video/Y, Cb/Pb, Cr/Pr) and Mini DIN 4 pin x 1(S-Video)
AV Audio Input Jacks	RCA Type x 2
Computer Input Jacks	DVI-I Terminal (Digital/Analog)
Computer Input/Monitor Output Terminal	(VGA) HDB15 Terminal x 1 (This terminal is switchable)
Computer Audio Input Jack	Mini Jack (stereo)
Control Port Connector	Mini DIN 8 pin x 1
USB Connector	USB Series B receptacle x 1
Audio Output Jacks	RCA Type x 2
Internal Audio Amp.	1.0watt RMS (monaural)
Built-in Speaker	1 speaker, 1.18” x 1.57” (30mm x 40mm)
Feet Adjustment	0˚ to 15.6˚
Voltage and Power Consumption	AC 100 ~ 120V (3.0A Max. Ampere), 50/60Hz (The U.S.A and Canada) AC 200 ~ 240V (1.5A Max. Ampere), 50/60Hz (Continental Europe)
Operating Temperature	41˚F ~ 95˚F (5˚C ~ 35˚C)
Storage Temperature	14˚F ~ 140˚F (-10˚C ~ 60˚C)
Remote Control Transmitters	Wireless Remote Control, batteries AA, UM3 or R06 Type x 2

● The specifications are subject to change without notice.

C UL US LISTED

This symbol on the nameplate means the product is Listed by Underwriters Laboratories Inc. It is designed and manufactured to meet rigid U.L. safety standards against risk of fire, casualty and electrical hazards.

■ Adjustments after Parts Replacement

● : Adjustment necessary ❍ : Check necessary

		Disassembly / Replaced Parts									
		LCD/ Prism Ass'y	Condenser Lens	Condenser Lens-Out	Relay Lens-Out	Polarized glass R	Polarized glass G	Polarized glass B	P. F. Board	Power Board	Main Board
Optical Adjustments	Contrast Adjustment										
	R-Contrast adjustment					●					
	G-Contrast adjustment						●				
	B-Contrast adjustment							●			
	Condenser lens adjustment	❍	●								
	Condenser lens-out adjustment	❍		●							
	Relay lens-out adjustment	❍			●						
Electrical Adjustments	Fan voltage adjustment									●	
	Signal center adjustment										●
	PSIG adjustment										●
	Gain adjustment [PC]										●
	Gain adjustment [Video]										●
	Gain adjustment [Component]										●
	Gamma gain adjustment [PC]										●
	Gamma gain adjustment [AV]										●
	Common center adjustment	●									●
	Signal offset adjustment [PC]										●
	Signal offset adjustment [AV]										●
	White balance adjustment	❍									❍

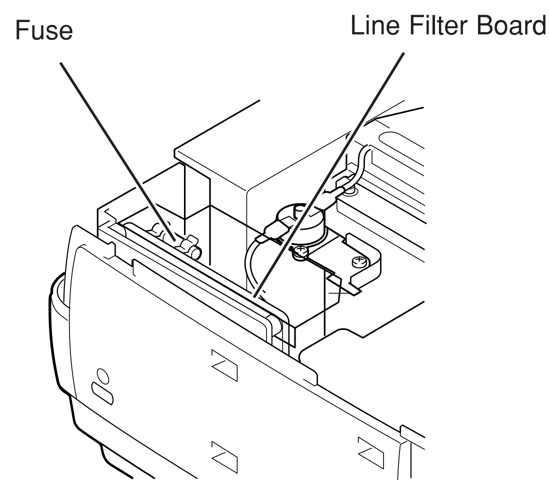
■ Circuit Protections

This projector provides the following circuit protections to operate in safety. If the abnormality occurs inside the projector, it will automatically turn off by operating one of the following protection circuits.

● Fuse

The fuse is located inside of the projector. When either the LAMP indicator or the READY indicator is not illuminated, fuse may be opened. Check the fuse as following steps.
It should be used the specified fuse as follows;

Fuse Part No.: 423 022 2102
TYPE T4.0AH 250V FUSE
LITTLE FUSE INC. TYPE 215004

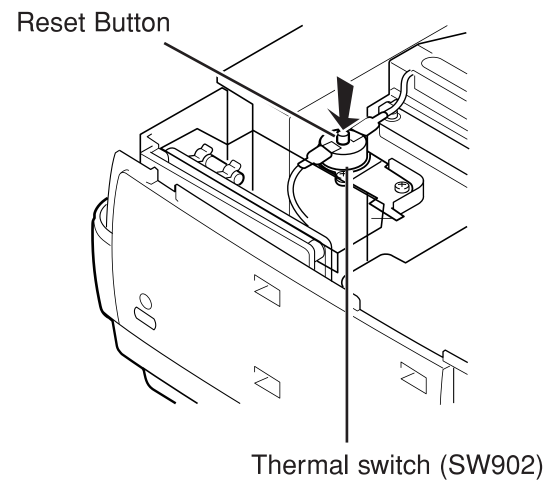


How to replace the fuse

1. Remove the cabinet top following to “Mechanical Disassemblies”.
2. Remove the fuse from fuse holder.
To install the fuse, take reversed step in the above.

● Thermal switch

There is the thermal switch (SW902) inside of the projector to prevent the internal temperature rising abnormally. When the internal temperature reaches near 100˚C, turn off the AC main power supply automatically.
The thermal switch is not reset to normal automatically even if the internal temperature becomes normal. Reset the thermal switch following procedure.
Check the resistance between terminals of thermal switch by using the tester. If it has high impedance, thermal switch may be in operative.



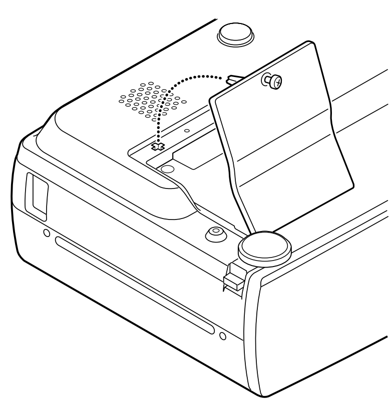
How to reset the thermal switch

1. Remove cabinet top following to the “Mechanical Disassemblies”.
2. Press the reset button on the thermal switch.

CAUTION:
Before press the reset button, make sure that the AC cord must be disconnected from the AC outlet.

● Interlock switch

The interlock switch (SW904) cuts off the AC mains power supply when the lamp cover is removed. After opening the lamp cover for replacing the lamp ass’y, place the lamp cover correctly otherwise the projector can not turn on.



● Warning temperature and power failure protection

The projector will be automatically turned off when the internal temperature of the projector exceeds the normal operating temperature, or the cooling fans stop, or the power supplies in the projector are failed.
- If the TEMP WARNING indicator (red) is flashing, it may detect the abnormal temperature inside the projector. Check the following possible causes and wait until the WARNING TEMP indicator flashing stops, and then try to turn on the projector.
- If both of the TEMP WARNING (red) and READY (green) indicators are flashing at the same time, It may defect the cooling fans and power supply circuits. Check fan operation and power supply lines referring to the chapter “Power supply & protection circuit” in the Chassis Block Diagram section.

Possible causes

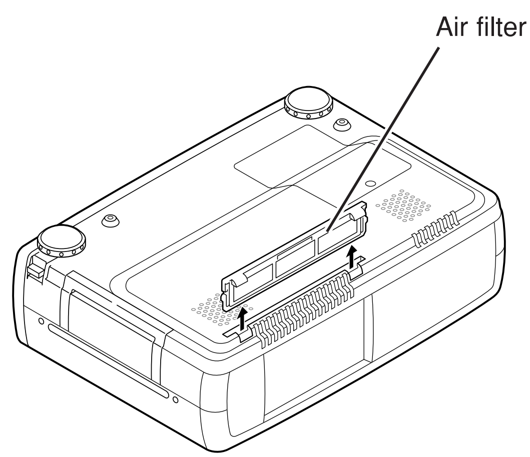
- Air filter is clogged with dust particles. Remove dust from the air filter by following instructions in the “Air filter care and cleaning” below.
- Ventilation slots of the projector are blocked. In such an event, reposition the projector so that ventilation slots are not obstructed.
- Check if projector is used at higher temperature place (Normal operating temperature is 5 to 35 ˚C or 41 to 95˚F)

Air filter care and cleaning

The removable air filter prevents dust from accumulation on the surface of the projection lens and projection mirror. Should the air filter become clogged with dust particles, it will reduce the cooling fan’s effectiveness and may result in internal heat build up and reduce the life of the projector.

To clean up the air filters, follow the cleaning procedure below:

1. Turn the power off, and disconnect the AC power cord from the AC outlet.
2. Turn the projector up side down and remove air filter by pulling the latches of it upward.
3. Clean the air filter with brush or wash out the dust and particles.
4. Replace the air filter properly. Make sure that the air filter is fully inserted.



CAUTION:

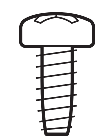
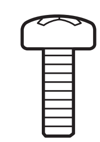
Do not operate the projector with the air filter removed. The dust is stuck on the LCD panel and the mirror, and it may spoil the fine picture image.
Do not put the small parts into the air intake vents. It may result in the malfunction of the projector. The air filters are small parts. Take care that children don’t eat or swallow it.

RECOMMENDATION

We recommend not to use the projector in dusty, smoky places. Using it in dusty place may cause the poor picture quality.
When using under the dusty or smoky conditions, dust may accumulate on the LCD panel and lens inside it, and may resultantly be projected on the screen together with the picture.
When the above symptoms are noticed, please clean up the LCD panel and lens following to the “Cleaning Method”.

■ Mechanical Disassemblies

Mechanical disassemble should be made following procedures in numerical order.
Following steps show the basic procedures, therefore unnecessary step may be ignored.
Caution:
The parts and screws should be placed exactly the same position as the original otherwise it may cause loss of performance and product safety.

Screws Expression (Type Diameter x Length) mm	
T type	M Type
	

1 Cabinet Top and Control Panel removal

1 Remove 4 screws **A** (M3x6) to take the Cabinet Top Ass'y upward off.
2 Remove the Control Panel off from the Cabinet Top by lifting the edge of control panel.

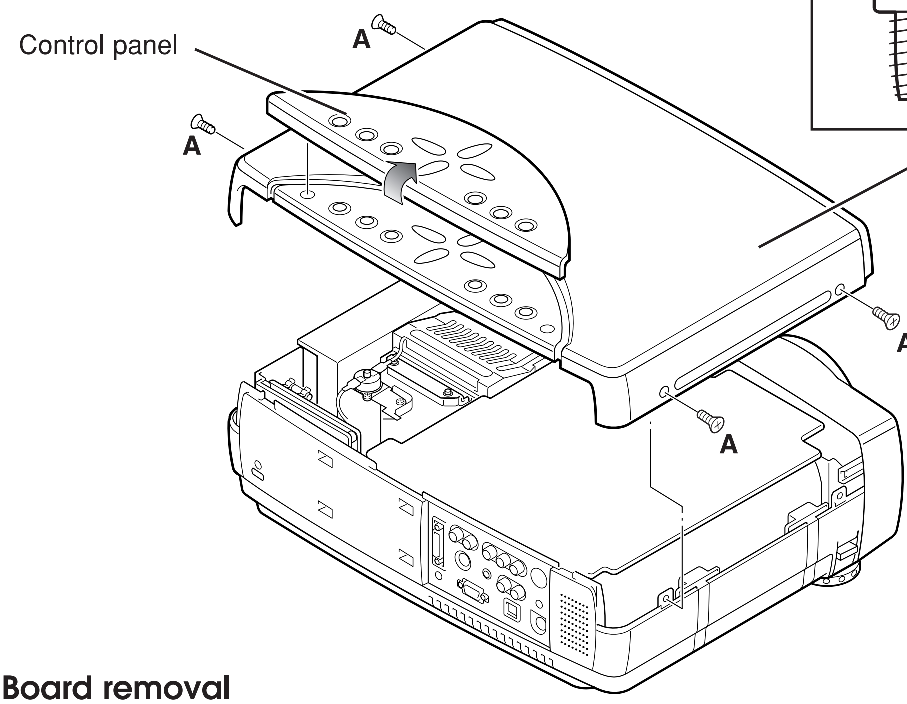


Fig.1

2 Main Board removal

1 Remove 8 screws (M3x6) to take the Main Board upward off.

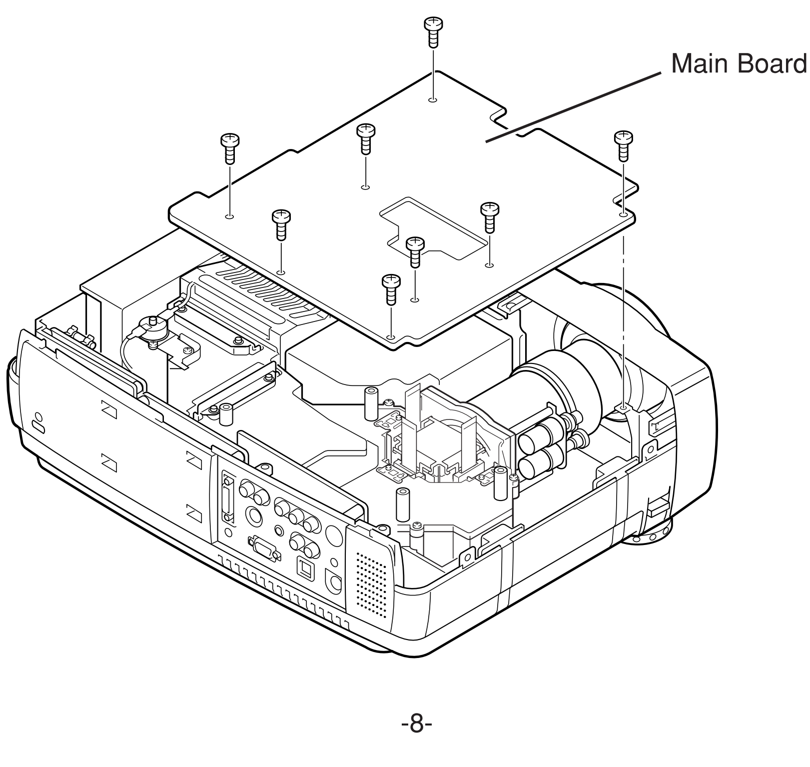


Fig.2

3 AV, DVI, Temp Board and Speaker removal

1 Remove 1 screw **A** (M4x8) to release grounding wires.
2 Pull the Rear Panel ass'y upward.
3 Remove 4 screws **B** (T3x6) and remove the AV Board.
4 Remove 4 screws **C** (T3x6) and remove the DVI Board.
5 Remove 4 screws **D** (T2.6x6) and remove the speaker.
6 Remove 1 screws **E** (T3x8) and remove the Sensor Board.

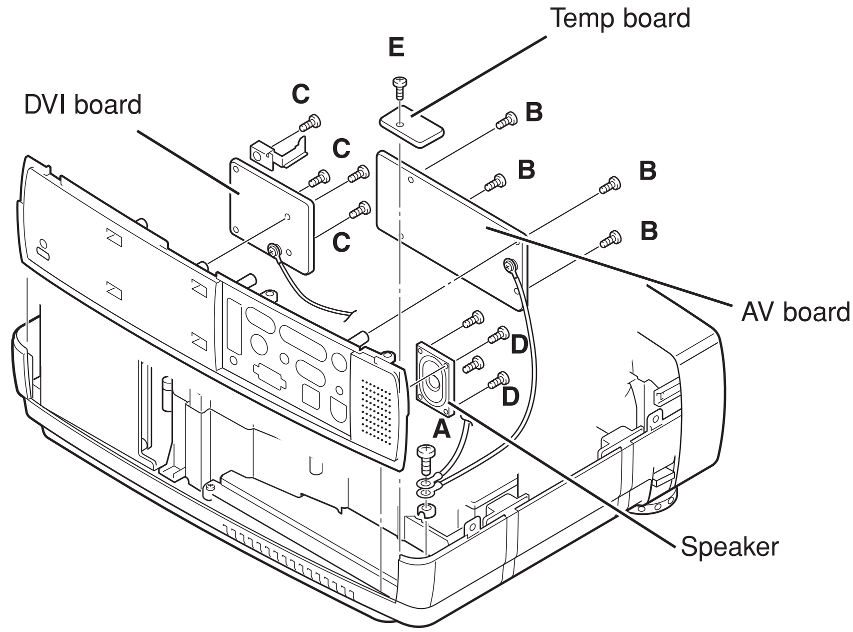


Fig.3

4 Front Panel and R/C Board removal

1 Remove 3 screws **A** (M3x4), 1 screw **B** (M3x8) and unhook 2 hooks **C** at the both of left and right side, and the take the Front Panel ass'y off.
2 Remove 1 screw **D** (T3x8) to take the R/C Board off.

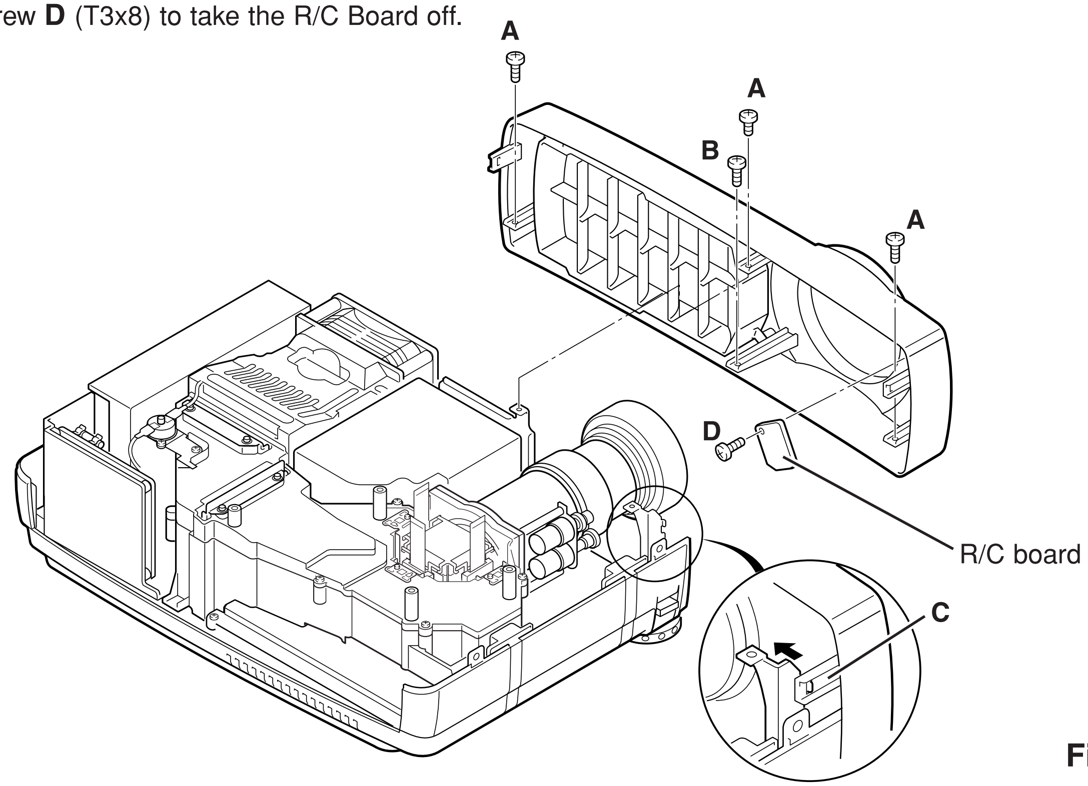


Fig.4

5 Lamp Ballast Unit removal

1 Remove 1 screw **A** (M3x4) and remove SW902, and then remove 1 screw **B** (M3x6) and disconnect the Lamp Socket.
2 Remove 2 screws **C** (M3x6) to take the Lamp Ballast ass'y upward off.
3 Remove 2 screws **D** (T2x6) to take the isolation sheet off.
4 Remove 4 screws **E** (T3x6) to take the lamp ballast board off.

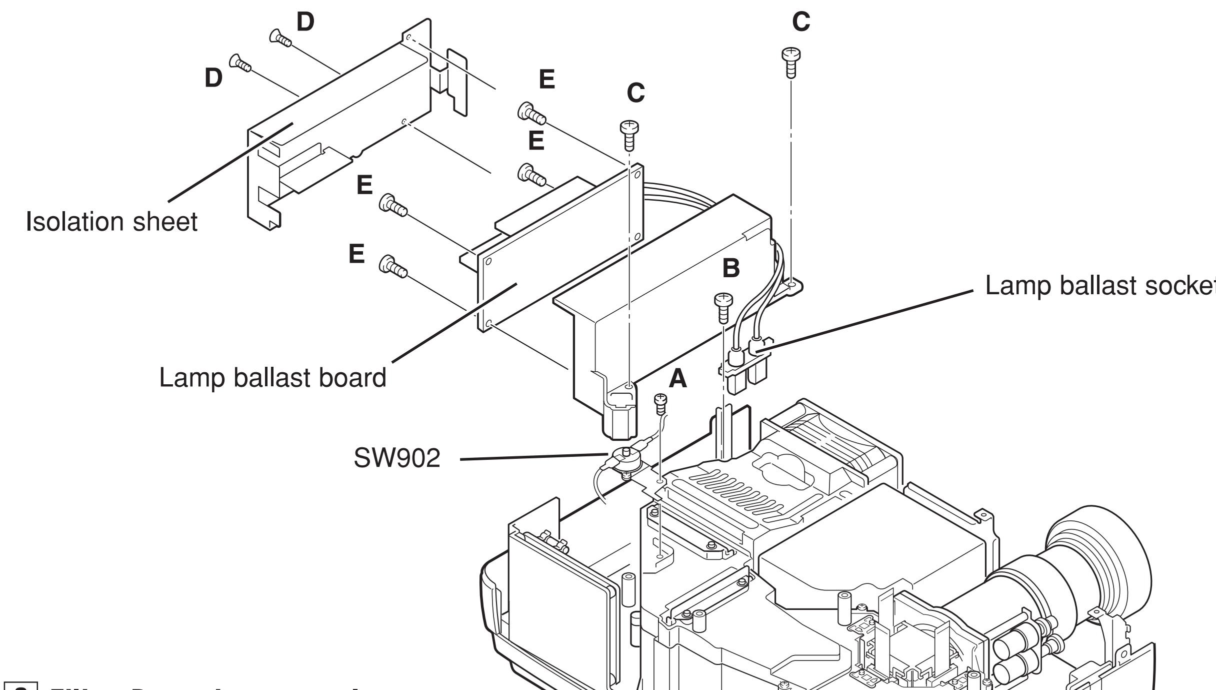


Fig.5

6 Filter Board removal

1 Remove 3 screws **A** (M3x6) and pull the Filter Board ass'y upward.
2 Remove 1 screw **B** (M4x8) to take the grounding lead from the cabinet bottom.
3 Remove 4 screws **C** (T3x8) to take the Filter Board off.

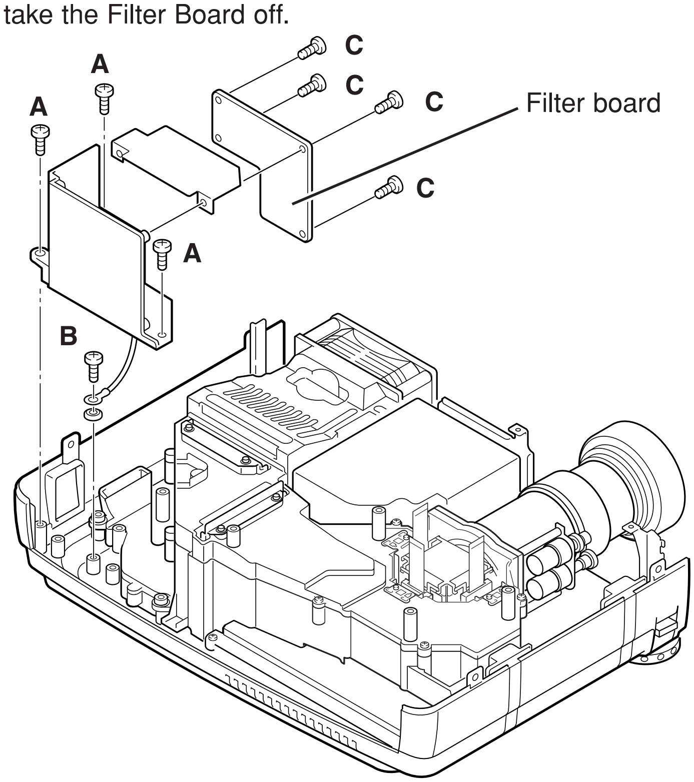


Fig.6

7 Power Box Cover and Fans(FN901, FN906) removal

1 Remove 4 screws **A** (M3x12) to take the Fan(FN901) off.
2 Remove 4 screws **B** (M3x8) to take the Fan(FN906) off.
3 Remove 3 screws **C** (M3x6) to take the Power Box Cover upward off.

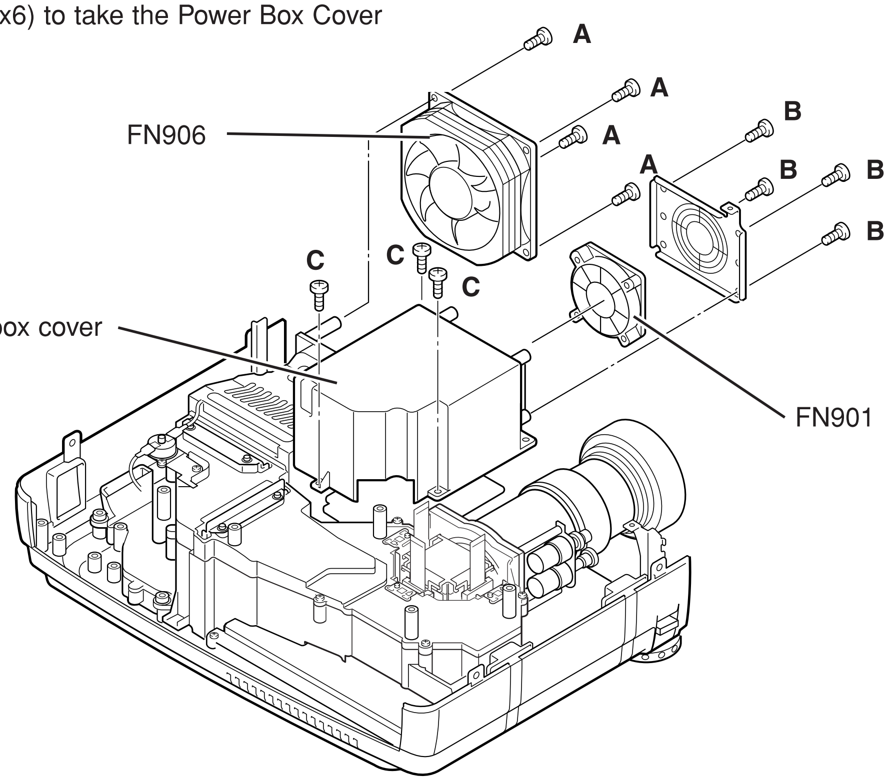


Fig.7

8 Optical Unit removal (1)

1 Remove 1 screw **A** (M3x6) to take the Lamp Cover off.
2 Loosen 3 screws **B** to take the Lamp assembly by pulling the handle.
Step to next procedure.

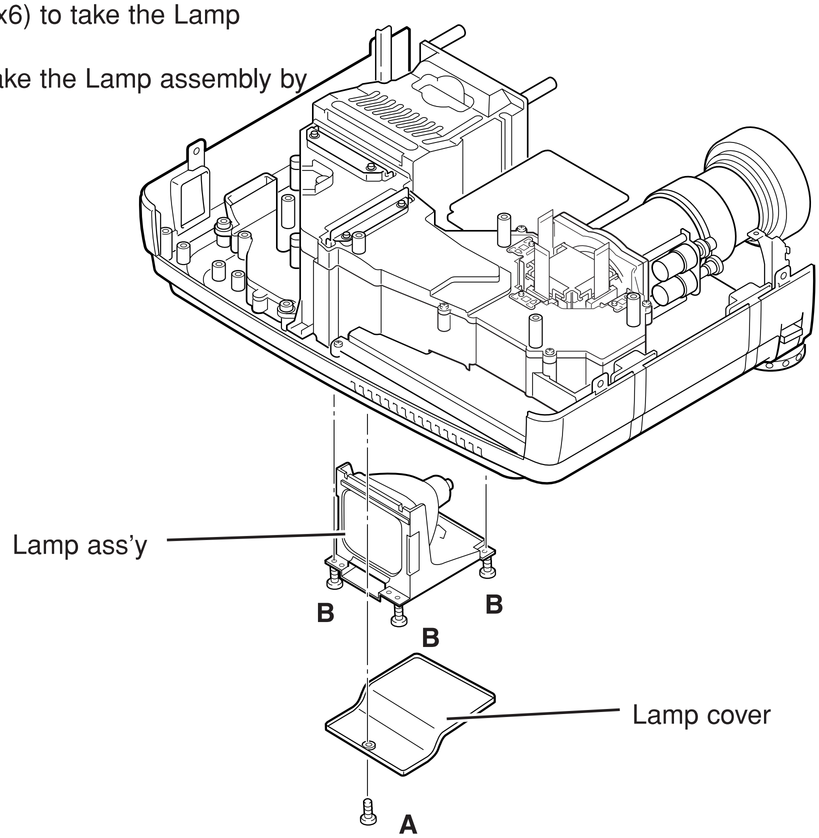


Fig.8-1

8 Optical Unit removal (2)

Step from previous procedure.
3 Remove 6 screws **C** (M3x8) to take the Optical Unit upward upward off.
To mount optical unit, mount optical unit first then mount the Lamp assembly and Lamp Cover.

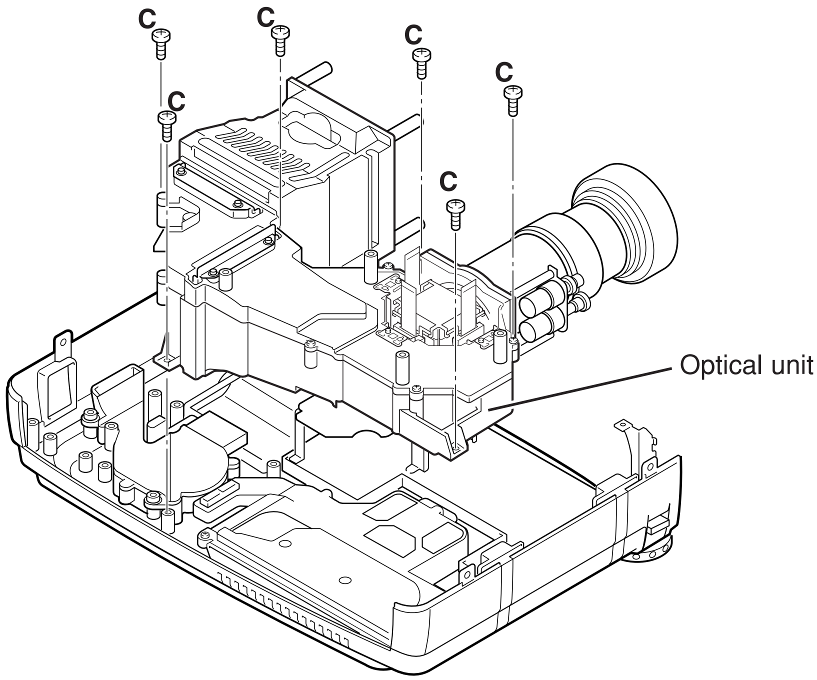


Fig.8-2

9 Power and P.F. Board removal

1 Remove 4 screws **A** (T3x6), 4 screws **B** (T3x8) to take the Power Board ass'y upward off.
2 Remove 4 screws **C** (M3x6) to take the P. F. Board from the Power Board.
3 Remove 3 screws **D** (M3x6) to take the Power Board holder from the Cabinet Bottom.

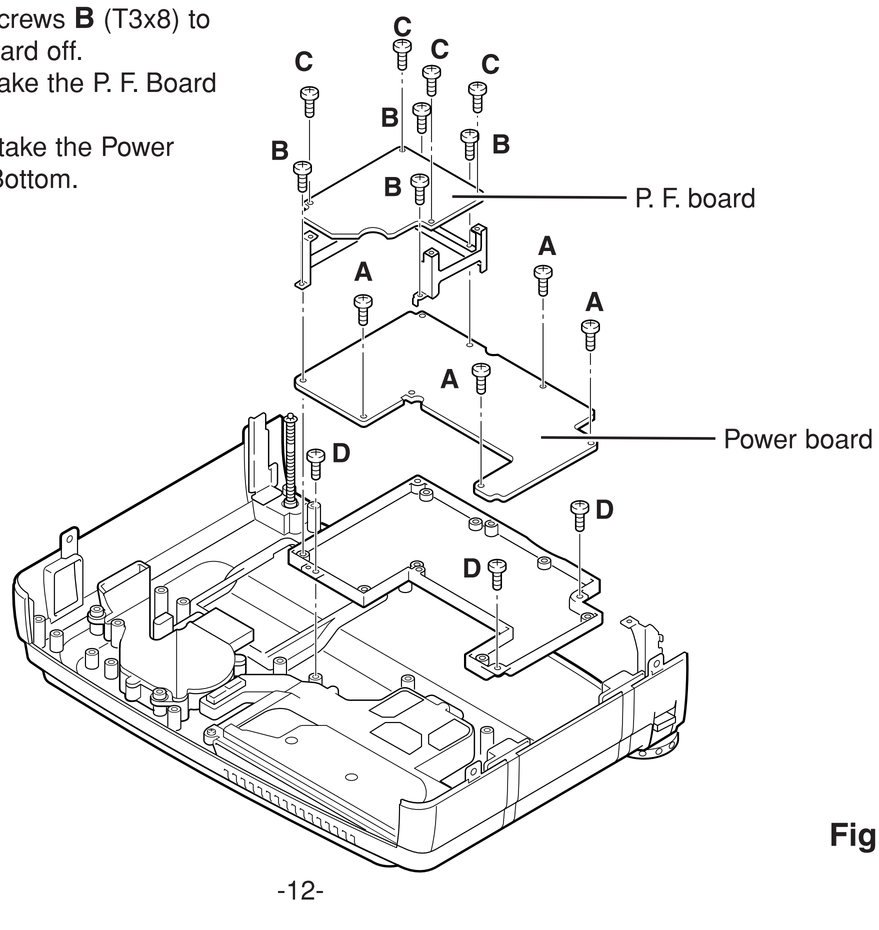


Fig.9

10 Fan (FN905) removal

1 Remove 1 screw **A** (M3x6) and take a Washer, Spring and Interlock Switch lever.
2 Pull the Fan and duct ass'y upward, then remove the 2 screws **B** (M3x6) to take the Fan (FN905) off.

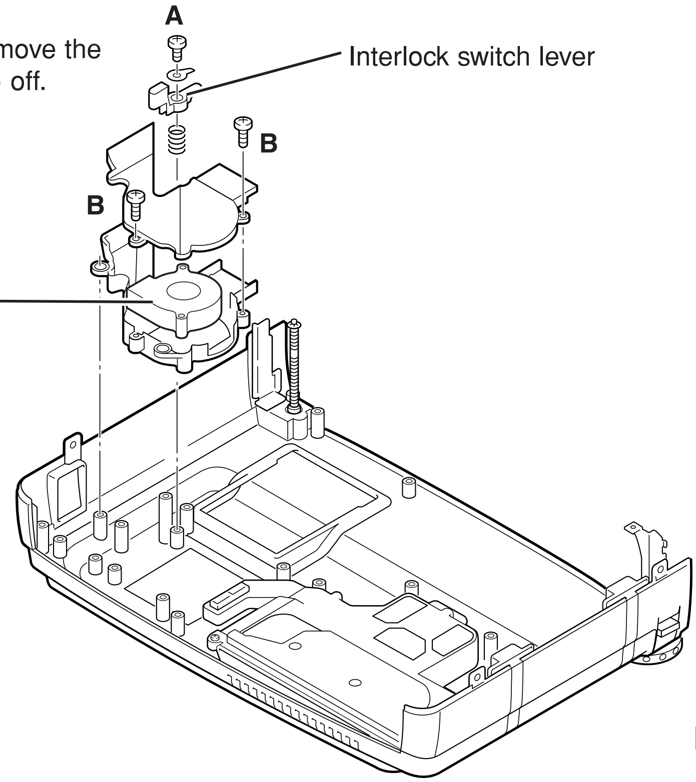


Fig.10

11 Fans (FN902, FN903, FN904) removal

1 Remove 8 screws **A** (T3x8) and to take the Fan Duct Top off and remove the Fans (FN902, FN903, FN904).
2 Remove 4 screws **B** (M3x6) to take the Fan Duct Bottom off from the Cabinet Bottom.

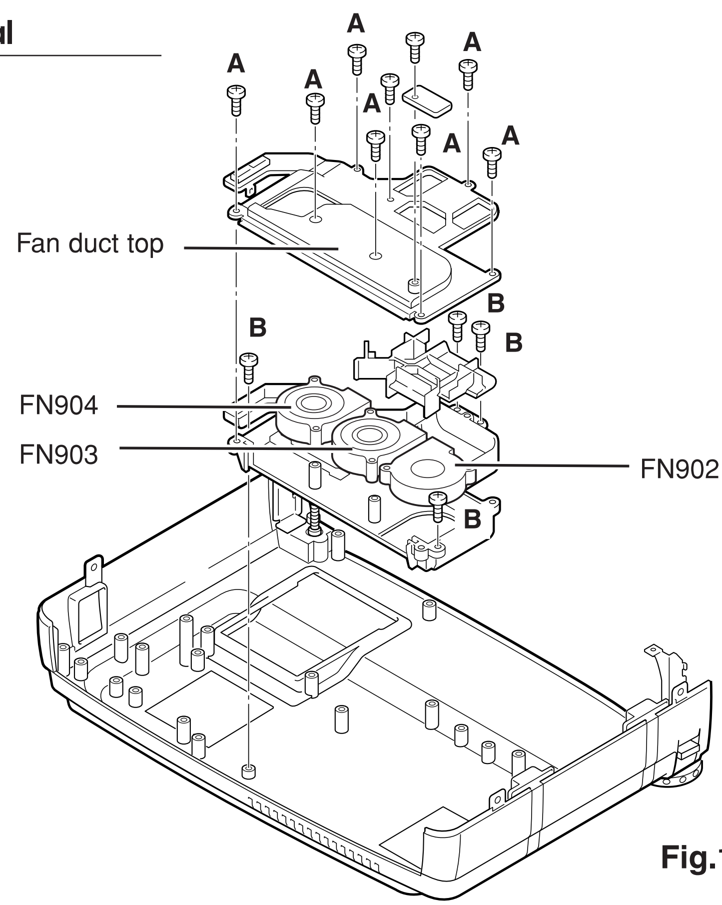


Fig.11

■ Optical Parts Disassemblies

Before taking this procedure, remove Cabinet Top and Main Board following to the “Mechanical Disassemblies”. Disassembly requires a 2.0mm hex wrench.

1 Projection Lens removal

1 Remove the Front Panel following to “Front Panel Removal” on “Mechanical Disassemblies”.
2 Remove 4 screws (M3x10) to take the Projection Lens ass’y off.

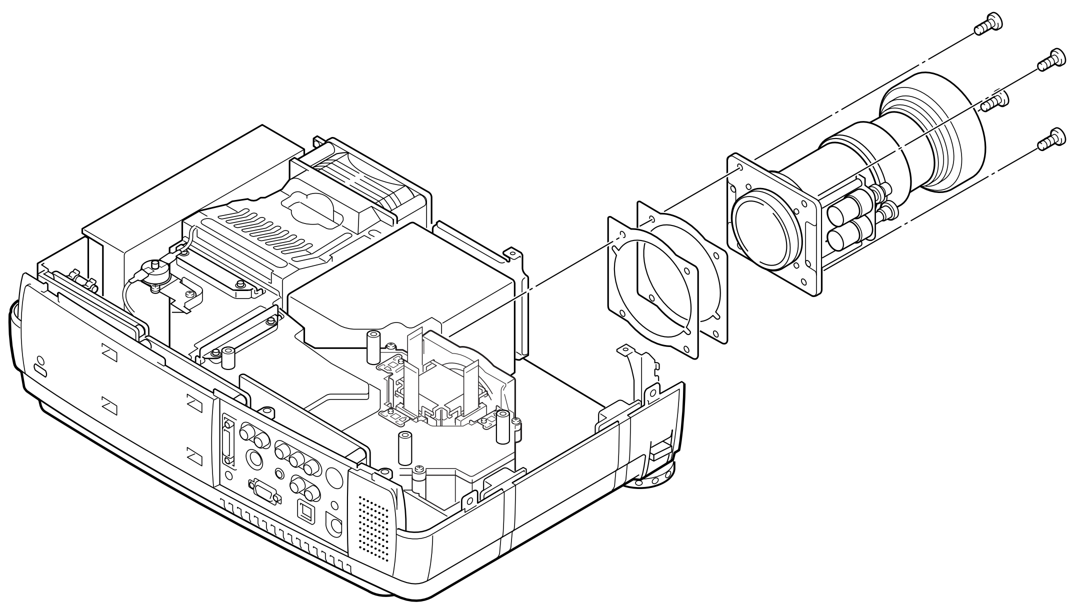


Fig.1

2 Integrator Lens-In disassembly

1 Remove 2 screws **A** (M2.5x6) and pull the Integrator Lens-In ass’y upward.
2 Remove 1 stoppers **B** and then take the Lens off from the holder.

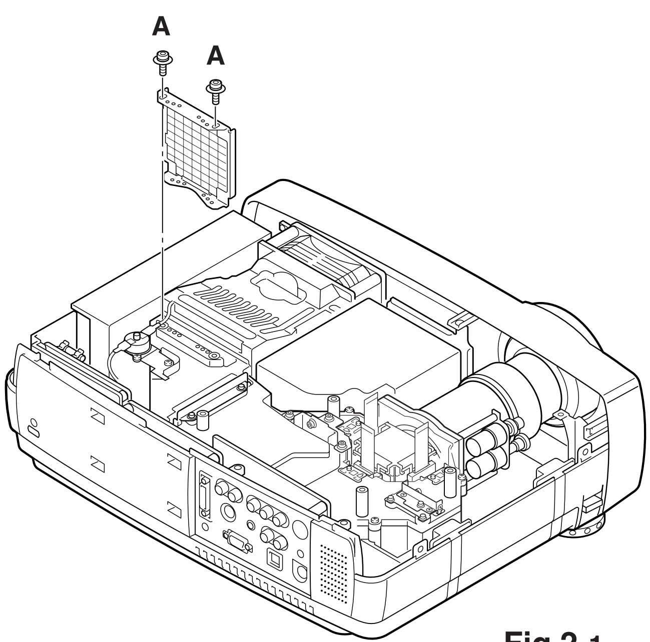
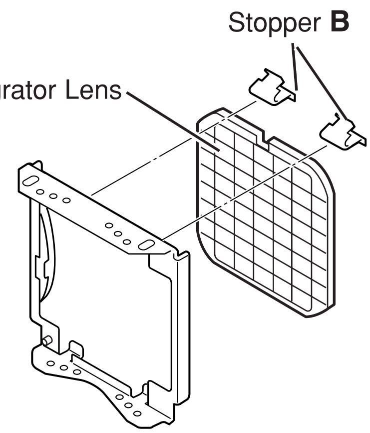


Fig.2-1



* Lens should be placed as the rugged surface side comes to the holder side.

Fig.2-2

3 Condenser lens disassembly

1 Remove 2 screws **A** (M2.5x6) and pull the Condenser Lens ass'y upward.
2 Remove 4 screws **B** (M2x4) to take the Lens off from the holder.

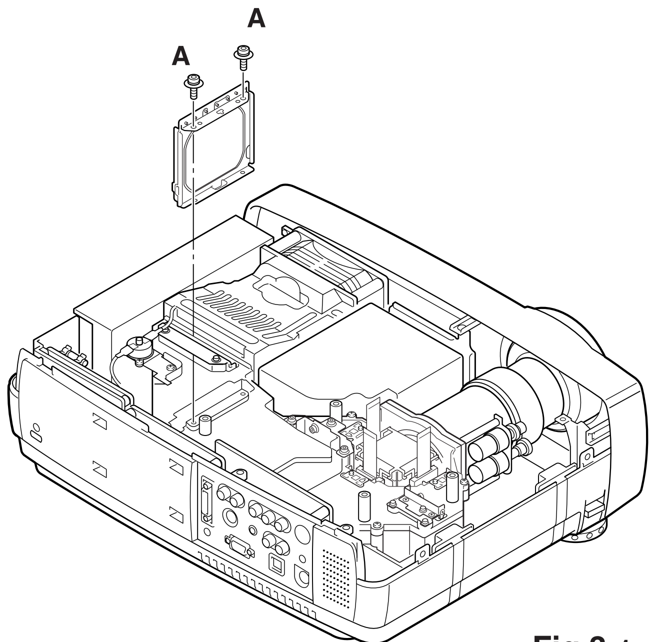
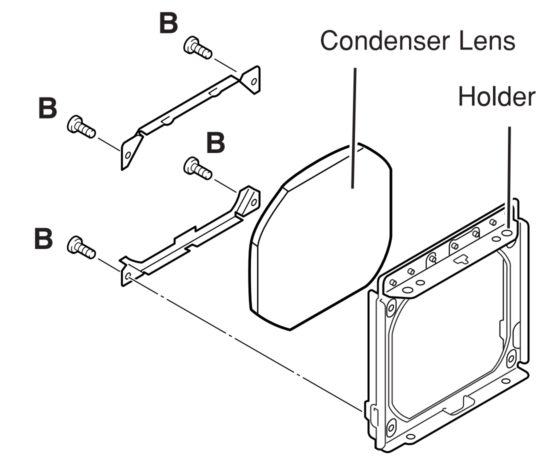


Fig.3-1



* Lens should be placed as the flat surface side comes to the holder side.

Fig.3-2

4 Condenser Lens-Out disassembly

1 Remove 2 screws **A** (M2.5x6) and pull the Condenser Lens-Out ass'y upward.
2 Remove 2 screws **B** (M2x4) to take the Lens off from the holder.
Note:
Should be place the lens as shown in the figure.

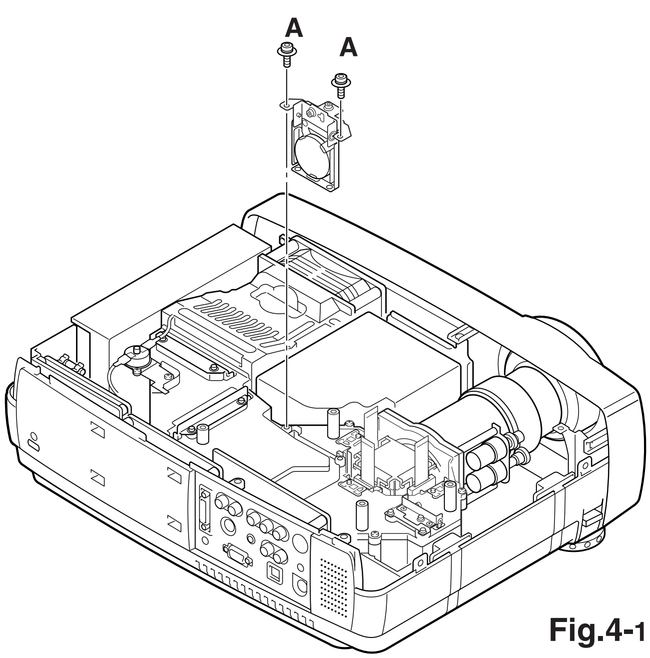


Fig.4-1

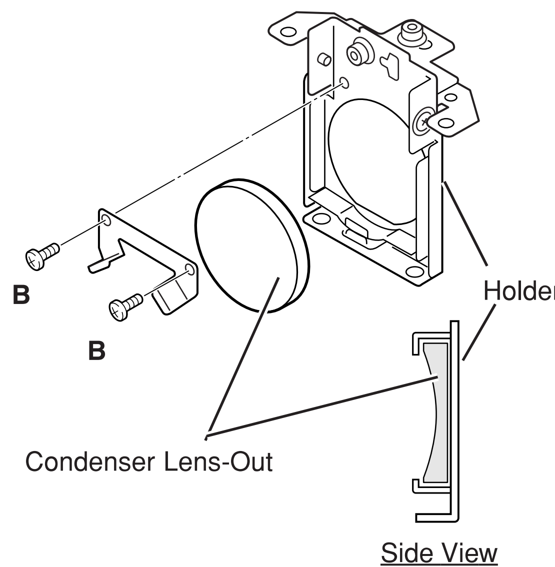


Fig.4-2

5 Relay Lens-Out disassembly

1 Remove 2 screws **A** (M2.5x6) and pull the Relay Lens-Out ass'y upward.
2 Remove 2 screws **B** (M2x4) to take the Lens off from the holder.
Note:
There is no mounting direction of the lens.

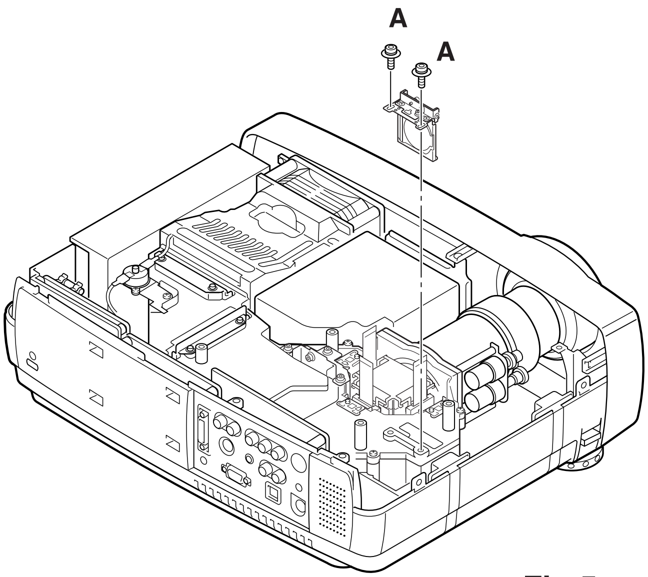


Fig.5-1

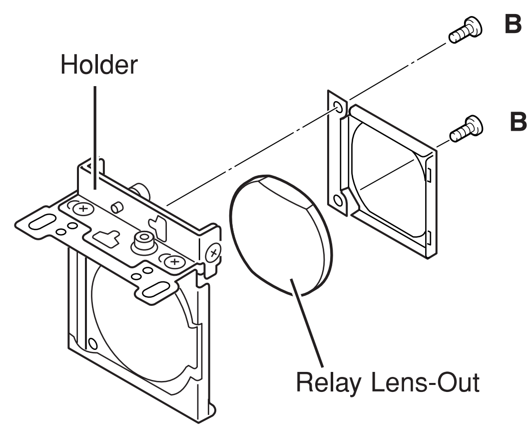


Fig.5-2

6 Polarized Glass-In removal

1 Remove each screw (M2.5x6) and pull the Polarized Glass-In ass'y upward.
2 Unhook the stoppers and take the glass off upward.

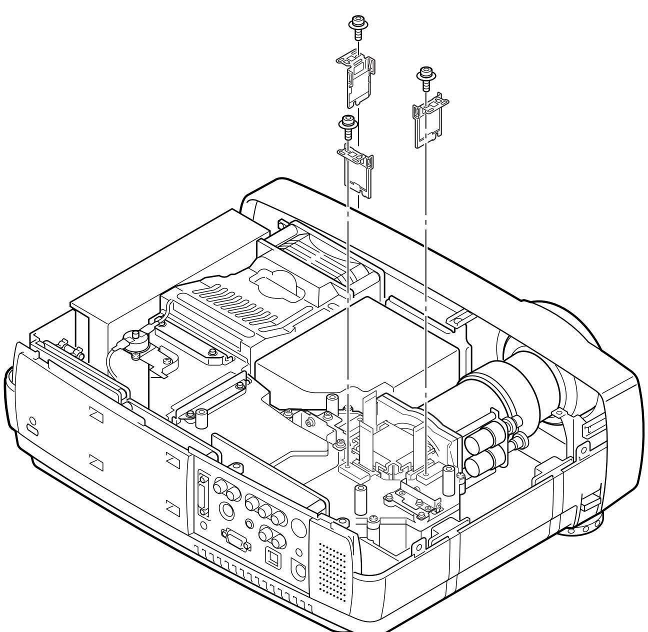
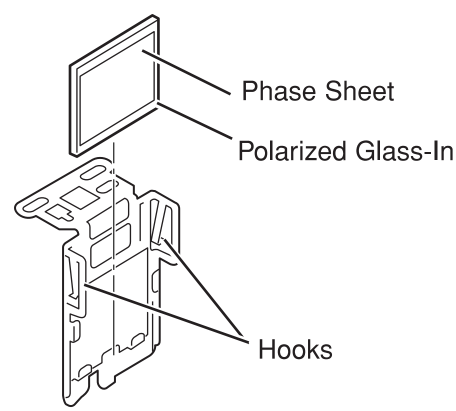


Fig.6-1



* Should be places the glass as the film attached side comes to the prism side.

Fig.6-2

7 Polarized Glass-Out/Pre-Polarized Glass removal

1 Remove 4 screws **A** (M2.5x4) and take the LCD/Prism ass'y off upward from the optical unit.
2 Remove each screw **B** and take the glass off upward.
Note: The G-LCD and B-LCD panels have a pre-polarized glass respectively as shown in Fig.7-2.

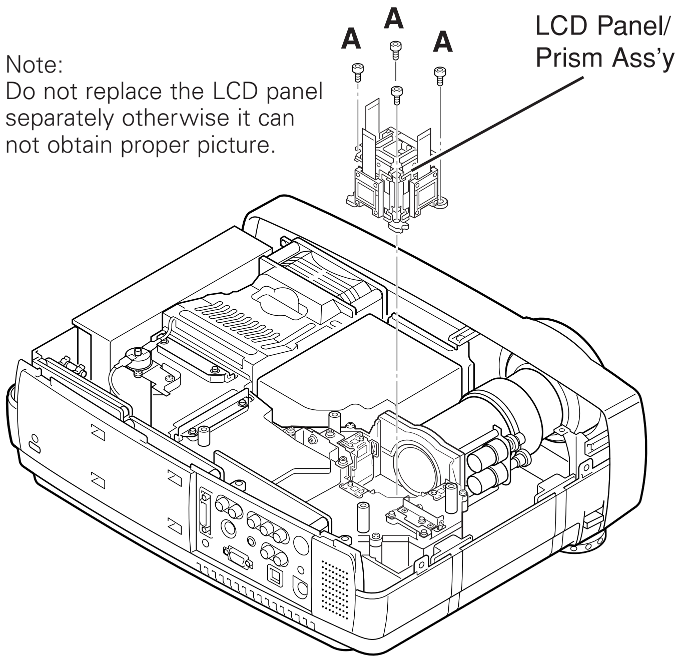


Fig.7-1

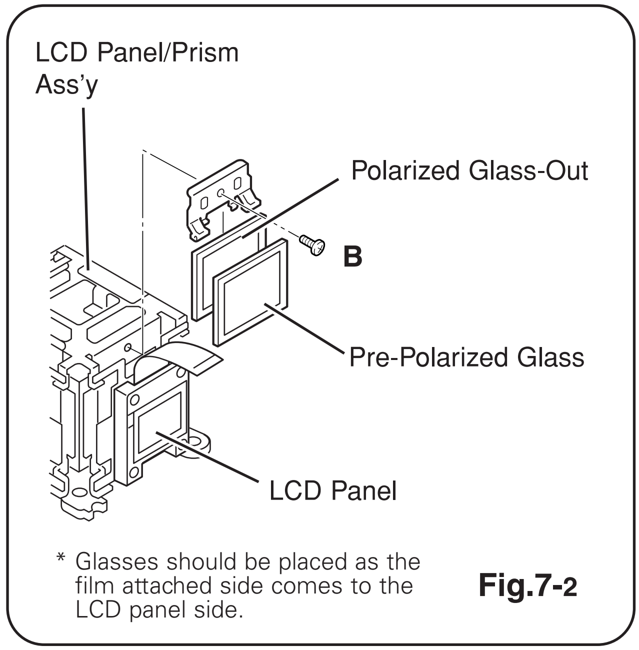


Fig.7-2

8 Optical Unit Top removal

1 Remove 9 screws (M3x10) to take the Optical Unit Top off upward.

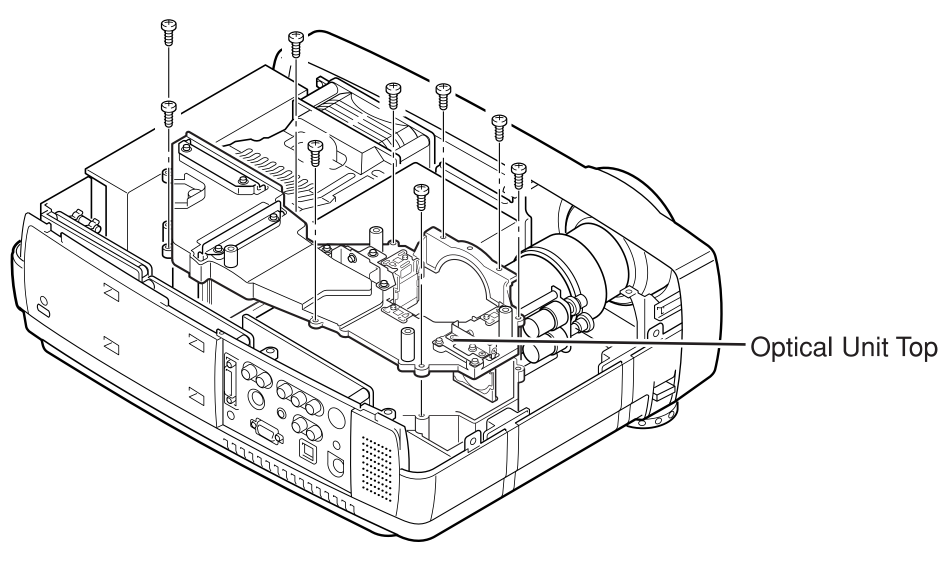


Fig.8

9 Locations and Directions

When the optical parts in the optical unit mounting or assembling, the parts must be mounted in the specified location and direction as shown in figure below.

Key No.	Description
1	Mirror (W)
2	Integrator lens (OUT)
3	Prism beam splitter (PBS)
4	Dichroic mirror (B)
5	Condenser lens (OUT)
6	Dichroic mirror (G)
7	Relay lens (IN)
8	Mirror (R)
9	Condenser lens (R)
10	Condenser lens
11	Condenser lens (B)
12	Optical filter (UV cut)
13	Mirror (B)

Note: The arrows in the figure are indicated that there are the direction of part placement. Place each part as the printed marker on the part comes to each arrow direction.

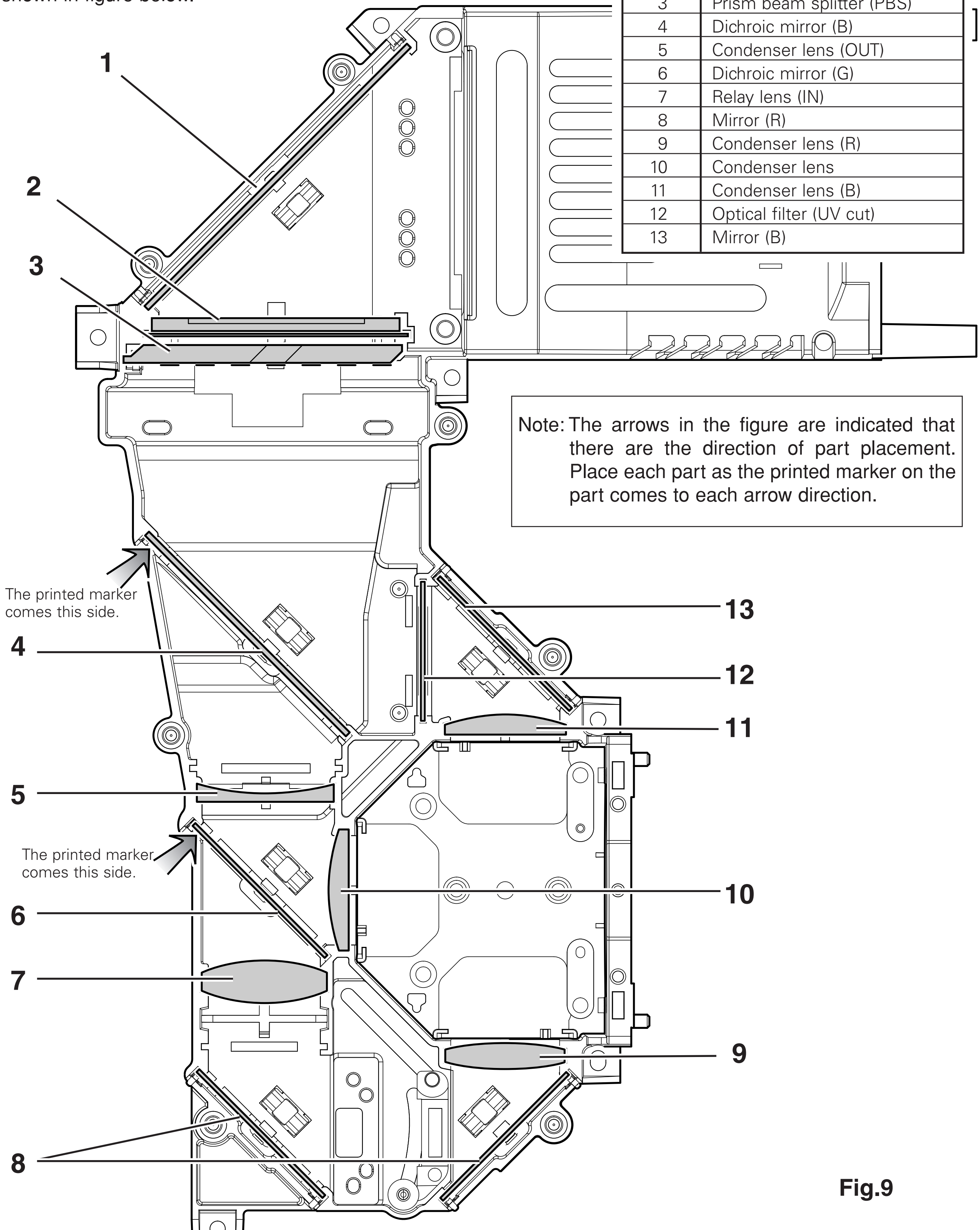


Fig.9

■ LCD Panel/Prism Ass’y Replacement

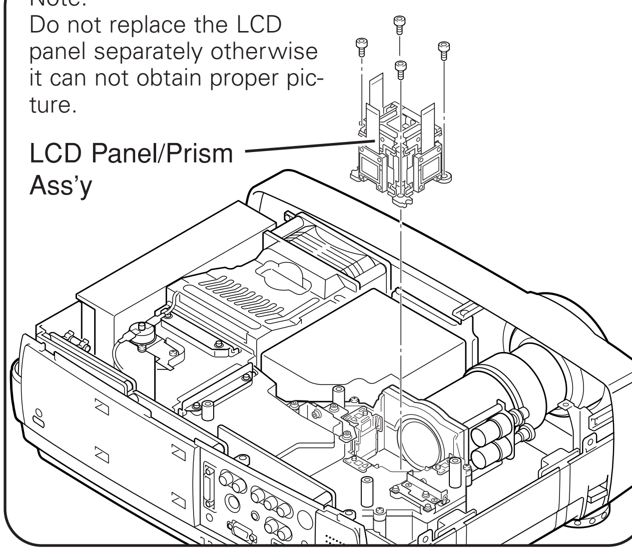
IMPORTANT NOTICE on LCD Panel/Prism Ass'y Replacement
LCD panels used for this model can not be replaced separately. Do not disassemble the LCD Panel/Prism Ass’y. These LCD panels are installed with precision at the factory. When replacing the LCD panel, should be replaced whole of the LCD panels and prism ass’y at once.
After replacing LCD Panel/Prism ass’y, please check the following points.

- Check that there is no color shading at the top, bottom, left or right of the screen. If there is, try to remove the shading following to the chapter “Optical Adjustment”.
- Check the white balance. If it needs the adjustment, adjust the white balance following to the “White Balance Adjustment” and “Common Centre Adjustment” in the chapter “Electrical Adjustment”.
- Check the white uniformity on the screen.
  If you find the color shading at the some part of the screen, it needs to take the color shading adjustment. This adjustment should be performed by a computer and it also requires a special software “Color Shading Correction”.

LCD Panel/Prism Ass’y removal

1 Remove the cabinet top and main board following to “Mechanical Disassemblies”.
2 Remove 4 screws by using the 2.0 mm hex driver and take the LCD Panel/Prism ass’y off upward from the optical unit.

Note:
Do not replace the LCD panel separately otherwise it can not obtain proper picture.

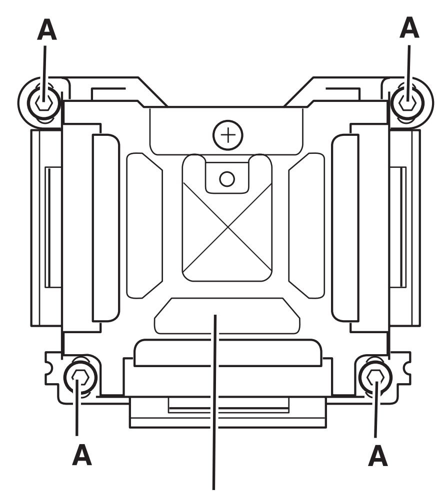


Note on LCD Panel/Prism Ass’y Mounting

After replacing or installing the LCD Panel/Prism ass'y, please make sure to obtain the best focus in both TELE and WIDE zoom. If the focus adjustment is required, please adjust the positioning of LCD Panel/Prism Ass’y by following below procedure.

Mounting Procedure:
1 Loosen 4 screws **A** on the LCD Panel/Prism ass'y with 2.0 mm hex driver.
2 Turn the projector on and project the image with WIDE zoom, and adjust the FOCUS control to obtain the best focus.
3 Turn the ZOOM control to the TELE position.
4 Move the LCD Panel/Prism Ass’y backward or forward (about 0mm ~ 0.8mm) to obtain the proper focus. Confirm the focus at TELE and WIDE zoom.
5 Tighten 4 screws **A** to fix the LCD Panel/Prism ass'y.

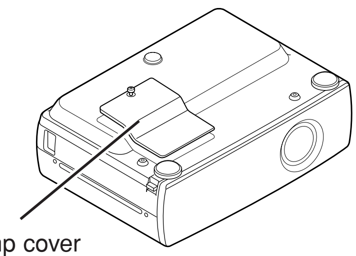
Top View

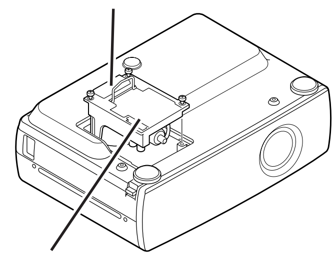


■ Lamp Replacement

WARNING:
- For continued safety, replace with a lamp assembly of the same type.
- Allow the projector to cool for at least 45 minutes before you open the lamp cover. The inside of the projector can become very hot.
- Do not drop the lamp module or touch the glass bulb! The glass can shatter and cause injury.

ORDER REPLACEMENT LAMP	
Type No.	Service Parts No.
POA-LMP53	610 303 5826





Procedure

1 Turn off the projector and disconnect the AC cord. Allow the projector to cool for at least 45 minutes.
2 Loosen 1 screws with a screwdriver and open the lamp cover.
3 Loosen 2 screws and pull out the lamp assembly by grasping the handle.
4 Replace the lamp assembly securely and tighten 2 screws.
5 Close the lamp cover and tighten 1 screw.
6 Connect the AC cord to the projector and turn on.

7 Reset the Lamp Replace Counter, see below explanation.

Note:
- Do not reset the Lamp Replace Counter, except after lamp is replaced.
- The projector can not be turned-on with lamp cover removed, because when the lamp cover is removed, the interlock switch is also released to switch off the mains power for safety.

How to reset Lamp Replace Counter

1 Turn the projector on, and press the **MENU** button and the on-screen menu will appear. Press the ◀ or ▶ button to move a red frame pointer to SETTING menu icon.
2 Press the ▲ button to move a red frame pointer to “Lamp counter reset” and then press the **SELECT** button. The message “Lamp replace counter reset?” is displayed. Move the pointer to [Yes] and the press the **SELECT** button.
3 Another confirmation dialog box appears and select [Yes] to reset Lamp Replace Counter .

Please refer to the owners manual for further information.

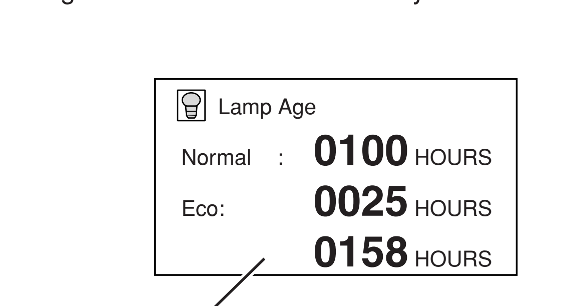
Recommendation

Should the air filter become clogged with dust particles, it will reduce the cooling fan’s effectiveness and may result in internal heat build up and short lamp life. We recommend cleaning the air filter after the projection lamp is replaced.
Refer to “Air Filter Cleaning”.

How to check Lamp used time

The LAMP REPLACEMENT indicator will illuminate when the total lamp used time reaches 2000 hours.
The total lamp used time is calculated by using the below expression,
Total lamp used time = $T_{eco} + T_{normal}\,(1+1/3)$
T_{eco}: used time in the Eco mode
T_{normal} : used time in the Normal mode
This is to indicate that lamp replacement is required.

You can check the lamp used time following to the below procedure.
1 Press and hold the ▲ button on the projector for more than 20 seconds.
2 The lamp used time in each normal mode and eco mode and total used time are displayed on the bottom right corner of the screen briefly.



Total lamp used time

■ Optical Adjustments

Before taking optical adjustments below, remove the Cabinet Top and Main Board following to the "Mechanical Disassemblies"
Adjustments require a 2.0mm hex wrench and a slot screwdriver. When you adjust Condenser lens, Condenser lens-out or Relay lens adjustment, you need to disconnect some connectors and FPC cables of LCD panels on the main board.
Note: Do not disconnect connectors K8N, K8P and K8H on the main board, because the projector can not turn on due to operate the power failure protection.

Contrast adjustment

[Before Adjustment]
- Input a 100% of black raster signal.

[R/G/B-CONTRAST ADJUSTMENT]

1 Loosen a screw **A** (**Fig.1-1/1-2**) on the polarized glass mounting base which you intend to adjust.
2 Turn the polarized glass mounting base as shown in **Fig.1-1** to obtain the darkest brightness on the screen.
3 Tighten the screw **A** to fix the polarized glass mounting base.

Repeat steps 1 to 3 for remaining polarized glasses.

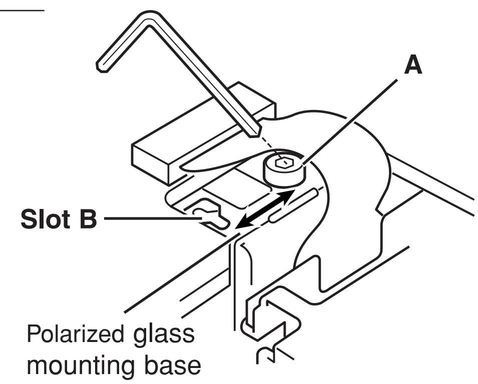


Fig.1-1

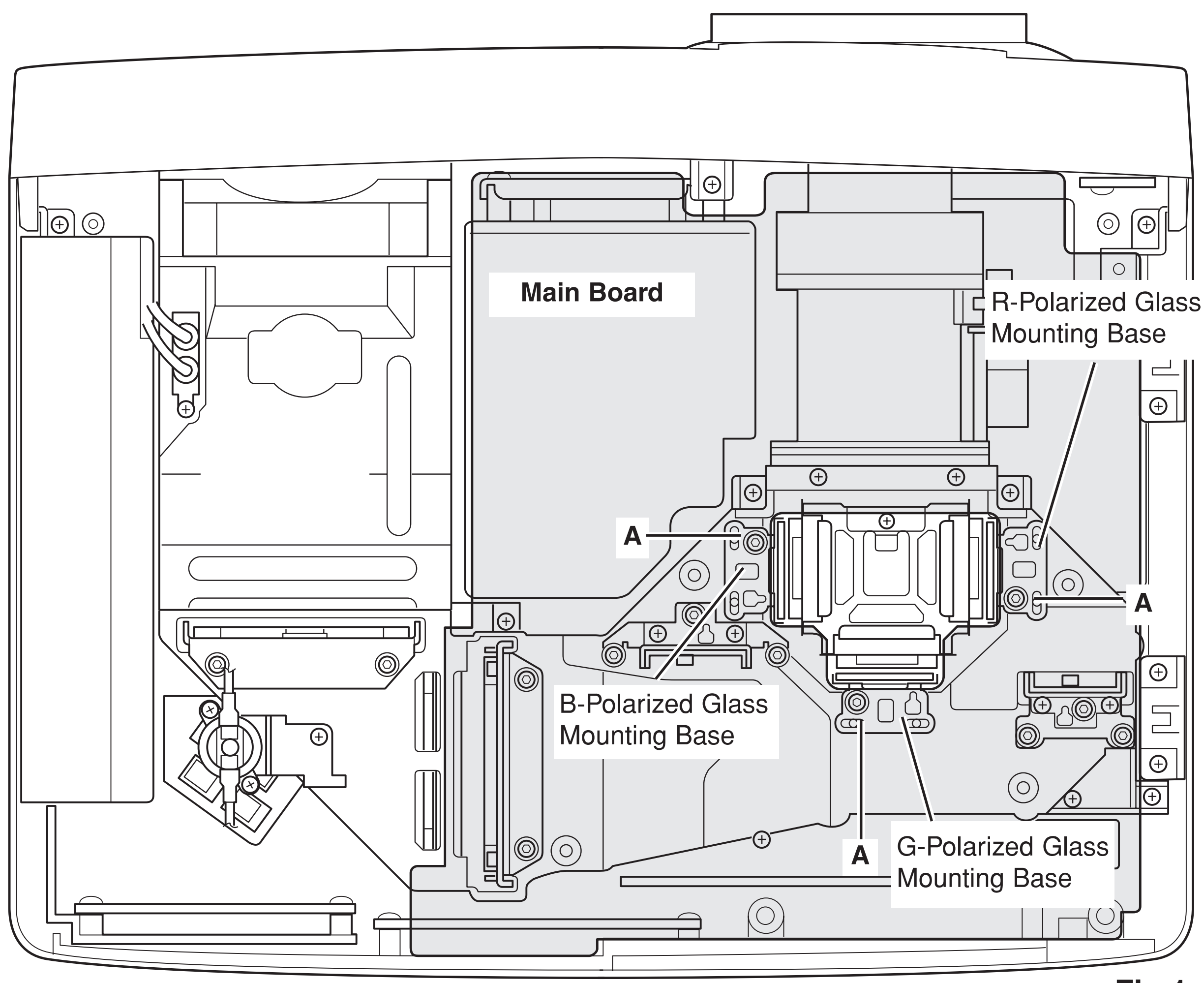


Fig.1-2

Condenser Lens adjustment

1 Turn the projector on by a state of without FPC cables.
2 Project only green light on the screen.
3 Adjust the adjustment base of condenser lens assy to make color uniformity in green.
1) If the shading appears on the left or right of the screen as shown in **Fig.2-1**, loosen 2 screws **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in green by using a slot screwdriver.
2) If the shading appears on the top or bottom of the screen as shown in **Fig.2-2**, loosen 2 screws **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in green by using a slot screwdriver
4 Tighten screws **A** and **C** to fix the Condenser lens unit.

Note:
The relay lens adjustment must be carried out after completing this adjustment.

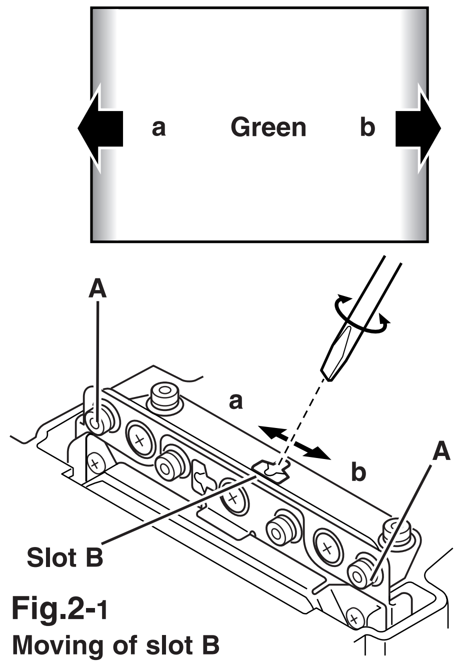


Fig.2-1
Moving of slot B

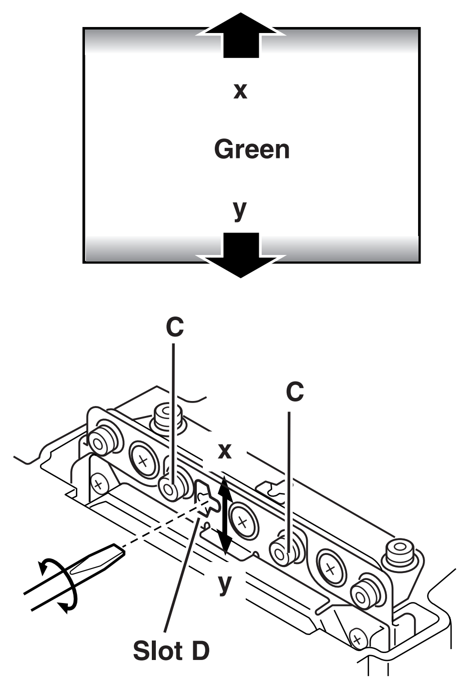
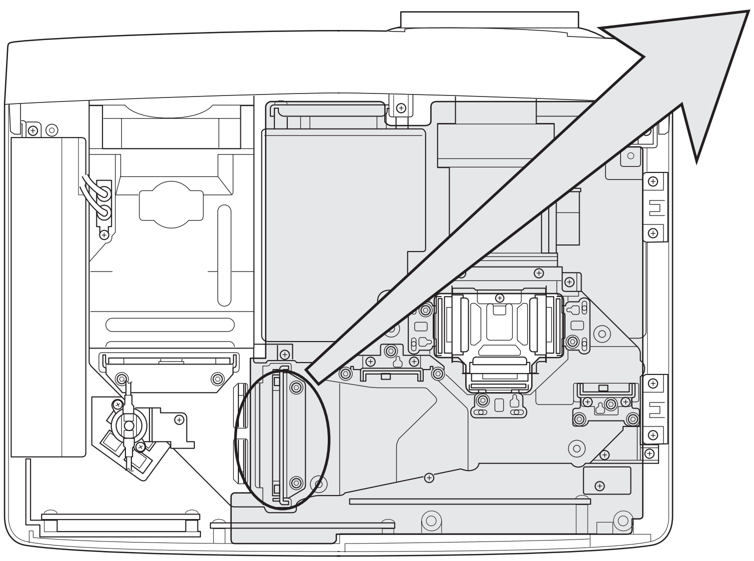
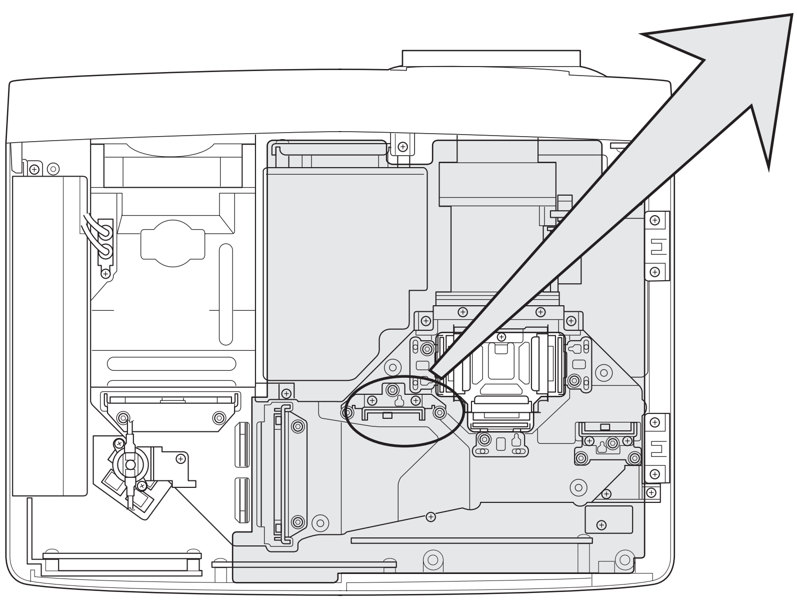


Fig.2-2
Moving of Slot D



Condenser Lens-Out adjustment

1 Turn the projector on by a state of without FPC cables.
2 Project green and blue lights on the screen.
3 Adjust the adjustment base of condenser lens-out assy to make color uniformity in cyan.
1) If the shading appears on the left or right of the screen as shown in **Fig.3-1**, loosen 1 screw **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in cyan by using a slot screwdriver.
2) If the shading appears on the top or bottom of the screen as shown in **Fig.3-2**, loosen 1 screw **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in cyan by using a slot screw driver.
4 Tighten the screw **A** and **C** to fix the relay lens unit.



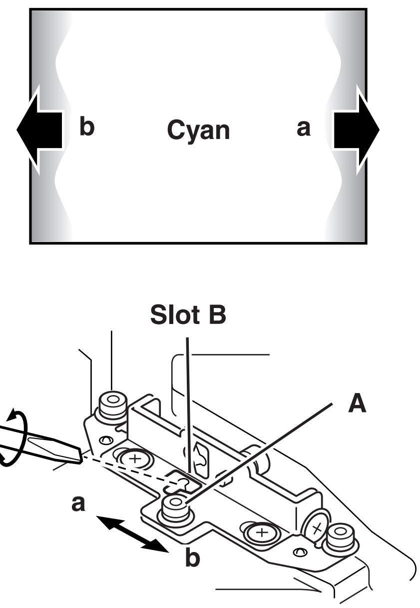


Fig.3-1
Moving of slot B

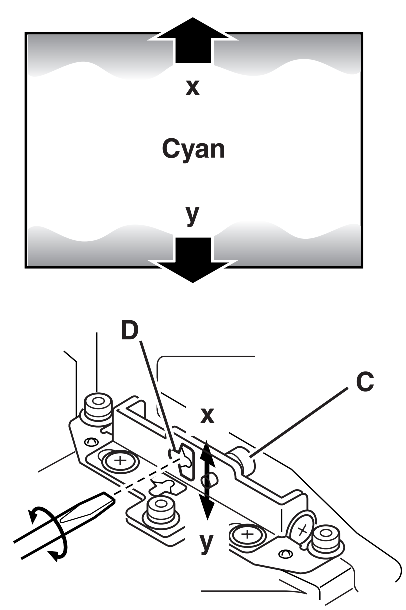


Fig.3-2
Moving of slot D

Relay lens-Out adjustment

1 Turn the projector on by a state of without FPC cables.
2 Project all of lights on the screen.
3 Adjust the adjustment base of relay lens assy to make color uniformity in white.
1) If the shading appears on the left or right of the screen as shown in **Fig.4-1**, loosen 1 screw **A** with the 2.0mm hex driver, and adjust the slot **B** to make color uniformity in white by using a slot screwdriver.
2) If the shading appears on the top or bottom of the screen as shown in **Fig.4-2**, loosen 1 screw **C** with the 2.0mm hex driver, and adjust the slot **D** to make color uniformity in white by using a slot screwdriver.
4 Tighten the screws **A** and **C** to fix the relay lens unit.

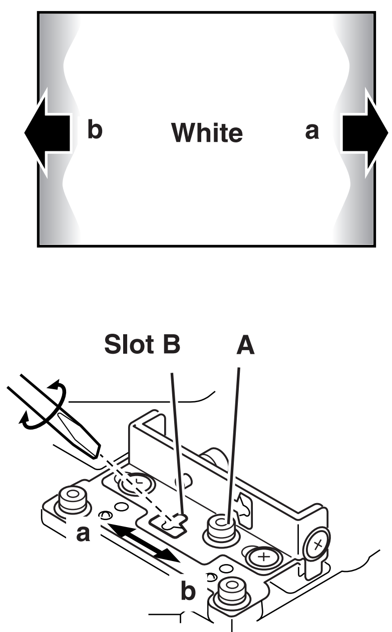


Fig.4-1
Moving of slot B

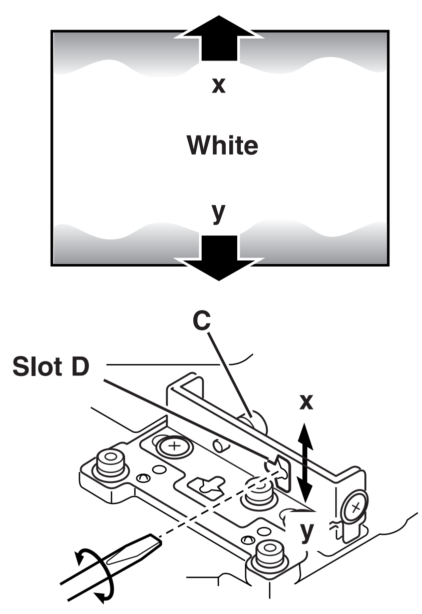
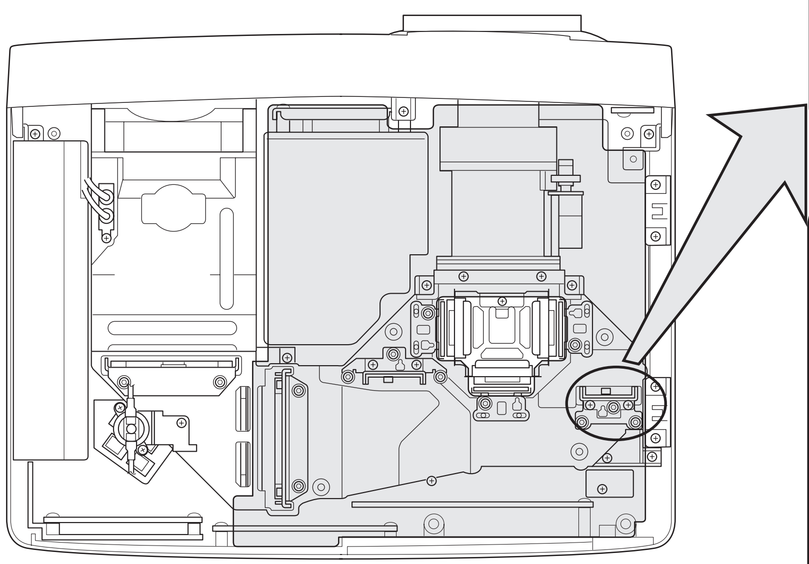


Fig.4-2
Moving of slot D



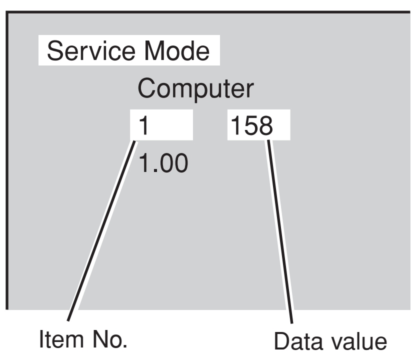
■ Electrical Adjustments

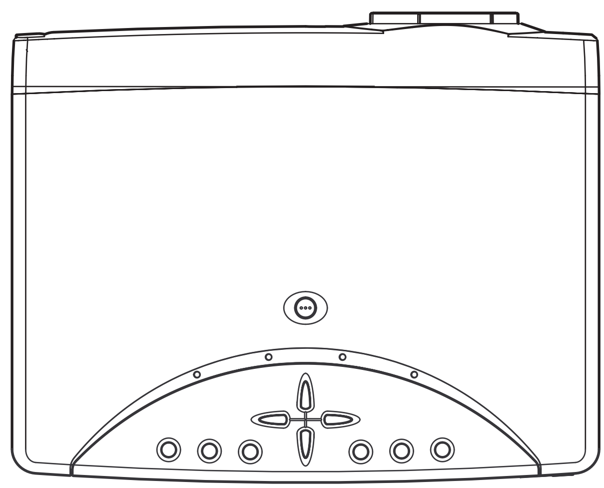
● Service Adjustment Menu Operation

To enter the service mode
To enter the “Service Mode”, press and hold the **MENU** and **IMAGE button** on the projector at the same time for more than 3 seconds. The service menu appears on the screen as follows.

To adjust service data
Select the adjustment item no. by pressing the ▲ or ▼ **button**, and change the data value by pressing the ◀ or ▶ **button**. Refer to the “Service Adjustment Data Table” for further description of adjustment item no. and data value.

To exit the service mode
To exit the service mode, press the **POWER ON-OFF button** on the projector or remote control unit.





● Memory IC Replacement

IC351 on the main board stores the data for the service adjustments, and should not be replaced except for the case of defective device.
If replaced, the re-adjustments are required following to the “Electrical Adjustments”.
The data of lamp replacement counter is stored in the IC351.
Please note that the lamp replace counter will be reset when the memory IC (IC351) is replaced.
(Lamp replace counter can not be set to the previous value.)

● Caution to memory IC replacement
When IC351 is replaced with new one, the CPU writes down the default data of the service adjustments to the replaced IC as the mentioned on the service adjustment table. As these data are not the same data as factory shipped data, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.
<u>Please note that in this case the lamp replace counter will be reset.</u>

● Caution of Main Board replacement (in the case IC351 is not defective)
When the main board is replaced, IC351 should be replaced with the one on previous main board. After replacement, it should be required to perform the re-adjustments following to the “Electrical Adjustments”.
<u>In this case, the lamp replace counter can be kept the value as before.</u>

● Circuit Adjustments

CAUTION: The each circuit has been made by the fine adjustment at factory. Do not attempt to adjust the following adjustments except requiring the readjustments in servicing otherwise it may cause loss of performance and product safety.

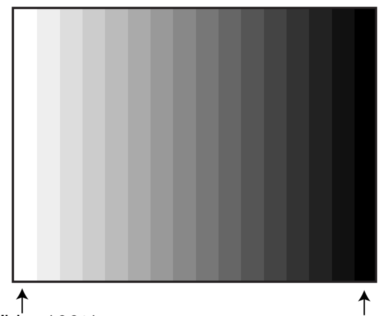
[Adjustment Condition]

● Input signal

- Video signal .... 1.0Vp-p/75Ω terminated, 16 steps gray scale (Composite video signal)
- Computer signal .... 0.7Vp-p/75Ω terminated, 16 steps gray scale pattern (XGA)
- Component Video signal ...... 0.7Vp-p/75Ω terminated, 16 steps gray scale (Component video signal with 480p or 1080i format)

● Picture control mode .... "STANDARD" mode unless otherwise noted.

16 steps gray scale pattern



Note:
* Please refer to "Service Adjustment Menu Operation" for entering the service mode and adjusting the service data.

Output Voltage adjustment

After replacing the Power Board, PF.C. Board, readjust the Output voltage adjustment as follows.

1. Connect a digital voltmeter to pins 1 (+) and 3 (-) of **K6D**.
2. Adjust the voltage by using **VR611** as following.

AC Input	Reading
230V	370V ±2V

Caution:
Be sure to connect the lamp when taking this adjustment.

* This adjustment is not required even if the power board is replaced because this adjustment is carried out before parts shipment.

1 Fan Voltage adjustment

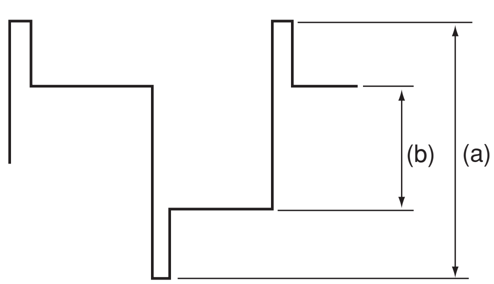
1. Set the lamp mode to "ECO" with the menu function.
2. Enter the service mode and select item no. "**74**". Set data value to "**1**".
3. Connect a digital voltmeter to test point "**TP12V1**" (+) and chassis ground (-). Select item no. "**75**" and adjust the voltage to be **8.0** ±0.1Vdc by changing the Data value.
4. Connect a digital voltmeter to test point "**TP12V2**" (+) and chassis ground (-). Select item no. "**76**" and adjust the voltage to be **9.0** ±0.1Vdc by changing the Data value.
5. Select item no. "**74**" and set data value to "**3**".
6. Connect a digital voltmeter to test point "**TP12V1**" (+) and chassis ground (-). Select item no. "**77**" and adjust the voltage to be **13.5** ±0.1Vdc by changing the Data value.
7. Connect a digital voltmeter to test point "**TP12V2**" (+) and chassis ground (-). Select item no. "**78**" and adjust the voltage to be **13.5** ±0.1Vdc by changing the Data value.
8. Select item no. "**74**" and set Data value to "**0**", and set the lamp mode to "Normal" with the menu function.

2 Signal Center adjustment

1. Receive the 16-step grey scale computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode.
3. Connect a digital voltmeter to test point "**TP505R**" (+) and chassis ground (-).
4. Select item no. "**1** and adjust the voltage to be **7.50** ±0.1Vdc by changing the Data value.
5. Connect a digital voltmeter to test point "**TP503G**" (+) and chassis ground (-).
6. Select item no. "**2**" and adjust the voltage to be **7.50** ±0.1Vdc by changing the Data value.
7. Connect a digital voltmeter to test point "**TP501B**" (+) and chassis ground (-).
8. Select item no. "**3**" and adjust the voltage to be **7.50** ±0.1Vdc by changing the Data value.

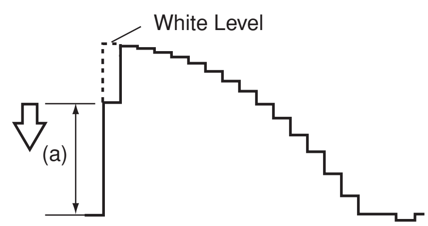
3 PSIG adjustment

1. Receive the 16-step gray scale computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TP3501**" (+) and chassis ground (-).
4. Select item no. "**22**" and adjust the amplitude "a" to be **9.5** ±0.1V by changing the Data value.
5. Select item no. "**23**" and adjust the amplitude "b" to be **1.0** ±0.1V by changing the Data value.



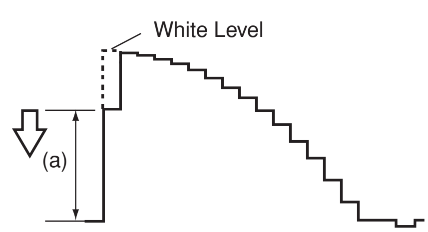
4 Gain adjustment (PC)

1. Receive the 16-step gray scale computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TP505R**" (+) and chassis ground (-).
4. Select item no. "**4**" and adjust the amplitude "a" to be minimum by changing the Data value.
5. Connect an oscilloscope to test point "**TP503G**" (+) and chassis ground (-).
6. Select item no. "**5**" and adjust the amplitude "a" to be minimum by changing the Data value.
7. Connect an oscilloscope to test point "**TP501B**" (+) and chassis ground (-).
8. Select item no. "**6**" and adjust the amplitude "a" to be minimum by changing the Data value.



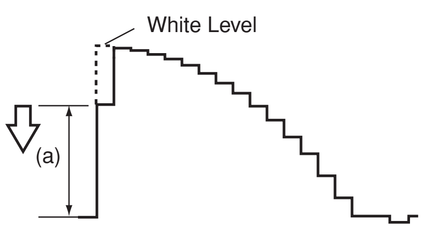
5 Gain adjustment (Video)

1. Receive the 16-step gray scale composite video signal with **Video [Video]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TP505R**" (+) and chassis ground (-).
4. Select item no. "**4**" and adjust the amplitude "a" to be minimum by changing the Data value.
5. Connect an oscilloscope to test point "**TP503G**" (+) and chassis ground (-).
6. Select item no. "**5**" and adjust the amplitude "a" to be minimum by changing the Data value.
7. Connect an oscilloscope to test point "**TP501B**" (+) and chassis ground (-).
8. Select item no. "**6**" and adjust the amplitude "a" to be minimum by changing the Data value.



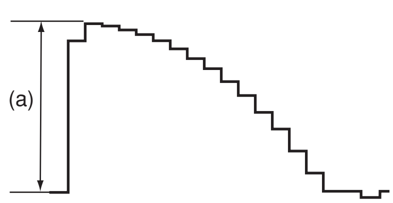
6 Gain adjustment (Component)

1. Receive the 16-step gray scale component video signal [480i] with **Video [Y,Cr,Cb]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP505R**” (+) and chassis ground (-).
4. Select item no. “**4**” and adjust the amplitude “a” to be minimum by changing the Data value.
5. Connect an oscilloscope to test point “**TP503G**” (+) and chassis ground (-).
6. Select item no. “**5**” and adjust the amplitude “a” to be minimum by changing the Data value.
7. Connect an oscilloscope to test point “**TP501B**” (+) and chassis ground (-).
8. Select item no. “**6**” and adjust the amplitude “a” to be minimum by changing the Data value.



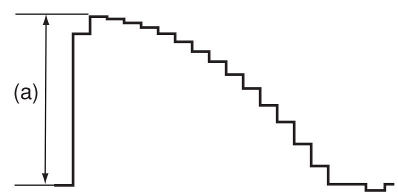
7 Gamma Gain adjustment (PC)

1. Receive the 16-step gray scale computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP505R**” (+) and chassis ground (-).
4. Select item no. “**13**” and adjust the amplitude “a” to be **4.0** ±0.1V by changing the Data value.
5. Connect an oscilloscope to test point “**TP503G**” (+) and chassis ground (-).
6. Select item no. “**14**” and adjust the amplitude “a” to be **4.0** ±0.1V by changing the Data value.
7. Connect an oscilloscope to test point “**TP501B**” (+) and chassis ground (-).
8. Select item no. “**15**” and adjust the amplitude “a” to be **4.0** ±0.1V by changing the Data value.



8 Gamma Gain adjustment (AV)

1. Receive the 16-step gray scale composite video signal with **Video [Video]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point “**TP505R**” (+) and chassis ground (-).
4. Select item no. “**13**” and adjust the amplitude “a” to be **4.0** ±0.1V by changing the Data value.
5. Connect an oscilloscope to test point “**TP503G**” (+) and chassis ground (-).
6. Select item no. “**14**” and adjust the amplitude “a” to be **4.0** ±0.1V by changing the Data value.
7. Connect an oscilloscope to test point “**TP501B**” (+) and chassis ground (-).
8. Select item no. “**15**” and adjust the amplitude “a” to be **4.0** ±0.1V by changing the Data value.

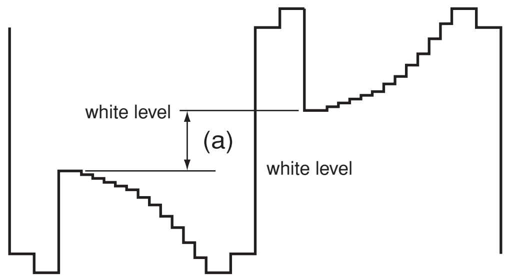


9 Common Center adjustment

1. Receive the 1 dot black & white pattern computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode.
3. Project only red light component to the screen.
4. Select item no. “**19**” and change data value to obtain the minimum flicker on the screen.
6. Project only green light component to the screen.
7. Select item no. “**20** and change data value to obtain the minimum flicker on the screen.
8. Project only blue light component to the screen.
9. Select item no. “**21**” and change data value to obtain the minimum flicker on the screen.

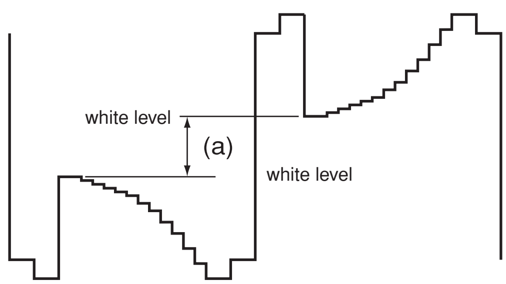
10 Signal Offset adjustment (PC)

1. Receive the 16-step gray scale computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TP503G**" (+) and chassis ground (-).
4. Select item no. "**10**" and adjust the amplitude "a" to be **2.4** ±0.1V by changing the Data value.



11 Signal Offset adjustment (AV)

1. Receive the 16-step gray scale composite video signal with **Video [Video]** mode.
2. Enter the service mode.
3. Connect an oscilloscope to test point "**TP503G**" (+) and chassis ground (-).
4. Select item no. "**10**" and adjust the amplitude "a" to be **2.4** ±0.1V by changing the Data value.



12 White Balance adjustment

[PC WHITE BALANCE ADJUSTMENT]

1. Receive the 16-step gray scale computer signal with **Computer [Analog RGB]** mode.
2. Enter the service mode, select item no. "**11**" (Red) or "**12**" (Blue), and change Data values respectively to make a proper white balance.

[AV WHITE BALANCE ADJUSTMENT]

3. Receive the 16-step gray scale composite video signal with **Video [Video]** mode.
4. Enter the service mode, select item no. "**11**" (Red) or "**12**" (Blue), and change Data values respectively to make a proper white balance.

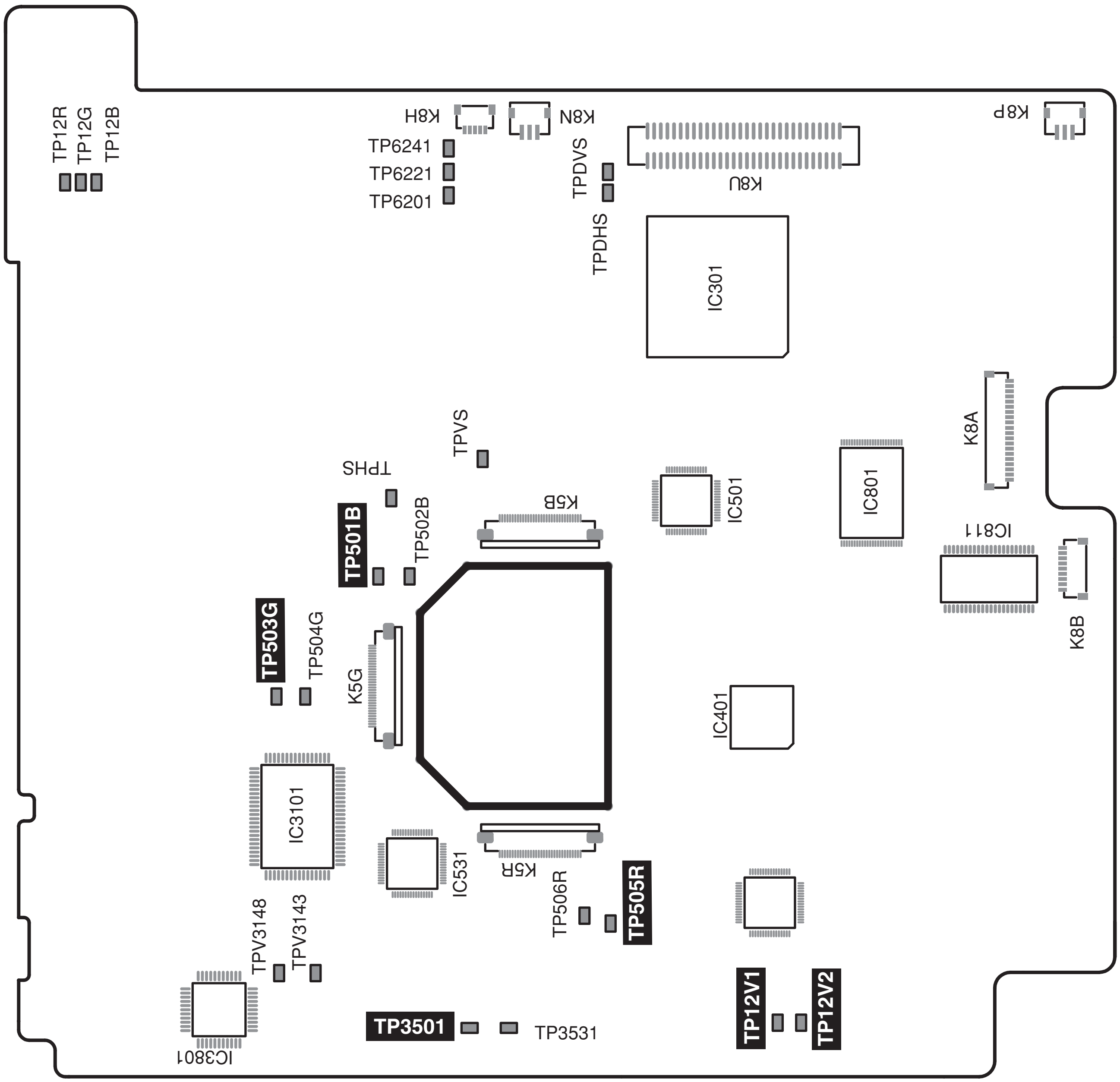
Confirm that the same white balance is obtained in video and computer input.

NOTE ON WHITE UNIFORMITY ADJUSTMENT

If you find the color shading on the screen, please adjust the white uniformity by using the proper computer and "Color Shading Correction" software supplied separately.

Test Points and Locations

● MAIN BOARD



● Service Adjustment Data Table

These initial values are the reference data written from the CPU ROM to memory IC when replaced new memory IC. The adjustment items indicated with "✻" are required to readjust following to the "Electrical adjustments". Other items should be used with the initial data value.

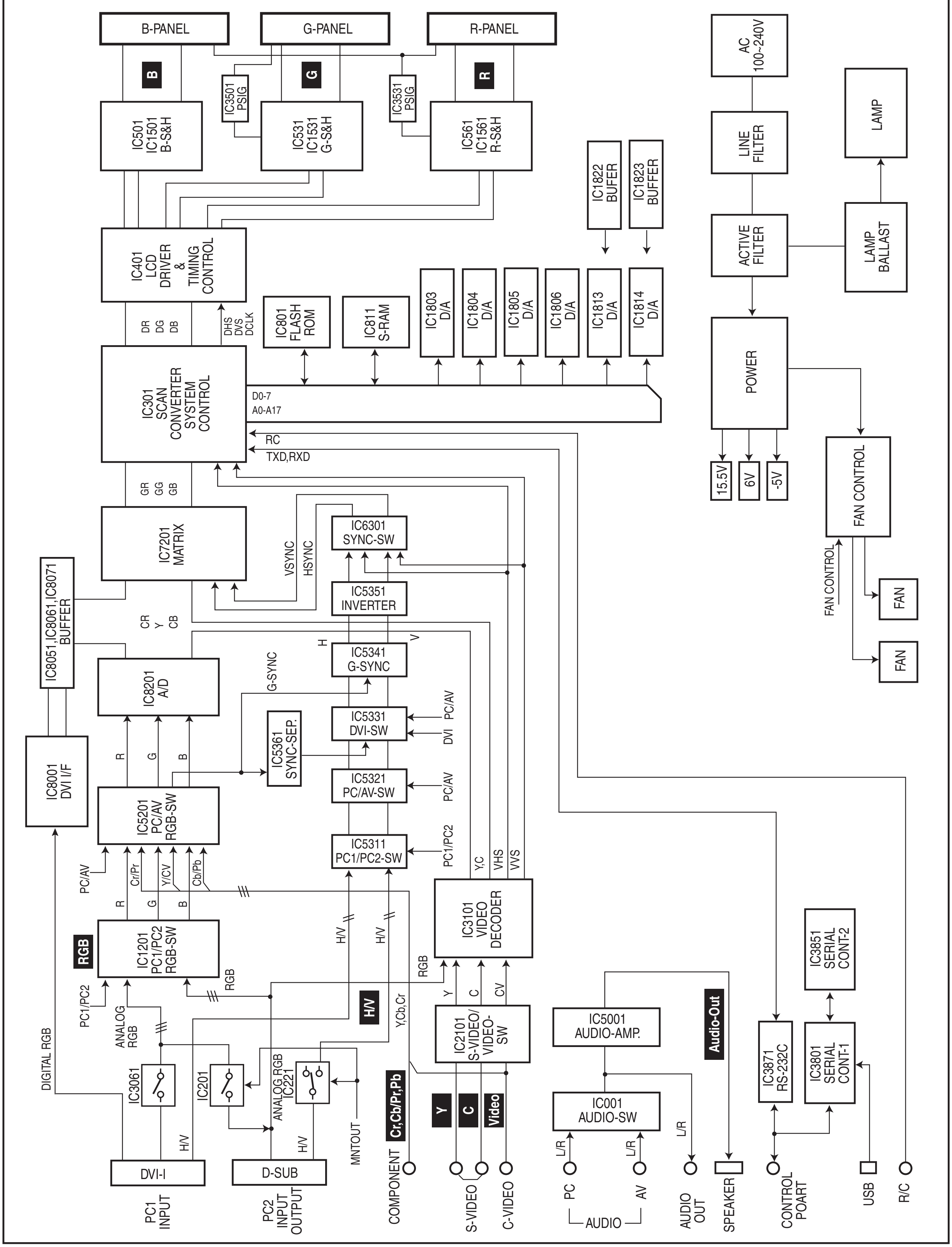
Item No.	Name	Device	Initial				Detail
			PC	YCbCr	Video		
					NTSC	PAL	
1	R-VIDEOCNT	M62392P/FP	150	150	150		
2	G-VIDEOCNT	M62392P/FP	150	150	150		✻ Video Center Adjustment
3	B-VIDEOCNT	M62392P/FP	150	150	150		
4	R-SubGain	CXD3526GG	124	124	124		
5	G-SubGain	CXD3526GG	124	124	124		✻ Gain Adjustment
6	B-SubGain	CXD3526GG	124	124	124		
7	R-SubBright	CXD3526GG	0	0	0		
8	G-SubBright	CXD3526GG	0	0	0		
9	B-SubBright	CXD3526GG	0	0	0		
10	G SIG-OFST	M62392P/FP	120	120	120		✻ Signal Offset Adjustment
11	B SIG-OFST	M62392P/FP	120	120	120		✻ White Balance Adjustment
12	R SIG-OFST	M62392P/FP	120	120	120		✻ White Balance Adjustment
13	R-GammaGain	CXD3526GG	128	128	128		
14	G-GammaGain	CXD3526GG	128	128	128		✻ Gamma Gain Adjustment
15	B-GammaGain	CXD3526GG	128	128	128		
16							
17							
18							
19	RVCOM	M62392P/FP	60				
20	GVCOM	M62392P/FP	60				✻ Common Center Adjustment
21	BVCOM	M62392P/FP	60				
22	SID1	M62392P/FP	60				✻ PSIG Adjustment
23	SID0	M62392P/FP	140				
24	SubBright	Matrix	62	57	57	57	
25	SubColor	Matrix	0	9	9	9	
26	SubTint	Matrix	32	32	32	32	
27	SubSharpness	Matrix	8	0	0	0	
28	SubBright(Video)	Micronas	N/A		16	14	
29	SubCont(Video)	Micronas	N/A		39	44	
30	SubColor(Video)	Micronas	N/A		2070	2070	
31	SubTint(Video)	Micronas	N/A		0	0	
32	YC Delay	Micronas	N/A		62	62	
33	SubSharpness	PW164	N/A		1	1	
34	V-Line Color Shading Correction Setting (R_OFFSET 1)	CXD3526GG	0				R-Vertical Line Color Shading Correction
35	V-Line Color Shading Correction Setting (R_OFFSET 2)	CXD3526GG	0				
36	V-Line Color Shading Correction Setting (R_OFFSET 3)	CXD3526GG	0				
37	V-Line Color Shading Correction Setting (R_OFFSET 4)	CXD3526GG	0				
38	V-Line Color Shading Correction Setting (R_OFFSET 5)	CXD3526GG	0				
39	V-Line Color Shading Correction Setting (R_OFFSET 6)	CXD3526GG	0				
40	V-Line Color Shading Correction Setting (R_OFFSET 7)	CXD3526GG	0				
41	V-Line Color Shading Correction Setting (R_OFFSET 8)	CXD3526GG	0				
42	V-Line Color Shading Correction Setting (R_OFFSET 9)	CXD3526GG	0				
43	V-Line Color Shading Correction Setting (R_OFFSET 10)	CXD3526GG	0				
44	V-Line Color Shading Correction Setting (R_OFFSET 11)	CXD3526GG	0				
45	V-Line Color Shading Correction Setting (R_OFFSET 12)	CXD3526GG	0				
46	V-Line Color Shading Correction Setting (G_OFFSET 1)	CXD3526GG	0				G-Vertical Line Color Shading Correction
47	V-Line Color Shading Correction Setting (G_OFFSET 2)	CXD3526GG	0				
48	V-Line Color Shading Correction Setting (G_OFFSET 3)	CXD3526GG	0				
49	V-Line Color Shading Correction Setting (G_OFFSET 4)	CXD3526GG	0				
50	V-Line Color Shading Correction Setting (G_OFFSET 5)	CXD3526GG	0				
51	V-Line Color Shading Correction Setting (G_OFFSET 6)	CXD3526GG	0				
52	V-Line Color Shading Correction Setting (G_OFFSET 7)	CXD3526GG	0				
53	V-Line Color Shading Correction Setting (G_OFFSET 8)	CXD3526GG	0				
54	V-Line Color Shading Correction Setting (G_OFFSET 9)	CXD3526GG	0				
55	V-Line Color Shading Correction Setting (G_OFFSET 10)	CXD3526GG	0				
56	V-Line Color Shading Correction Setting (G_OFFSET 11)	CXD3526GG	0				
57	V-Line Color Shading Correction Setting (G_OFFSET 12)	CXD3526GG	0				
58	V-Line Color Shading Correction Setting (B_OFFSET 1)	CXD3526GG	0				B-Vertical Line Color Shading Correction
59	V-Line Color Shading Correction Setting (B_OFFSET 2)	CXD3526GG	0				
60	V-Line Color Shading Correction Setting (B_OFFSET 3)	CXD3526GG	0				

Item No.	Name	Device	Initial				Detail	
			PC	YCbCr	Video			
					NTSC	PAL		
61	V-Line Color Shading Correction Setting (B_OFFSET 4)	CXD3526GG	0					
62	V-Line Color Shading Correction Setting (B_OFFSET 5)	CXD3526GG	0					
63	V-Line Color Shading Correction Setting (B_OFFSET 6)	CXD3526GG	0					
64	V-Line Color Shading Correction Setting (B_OFFSET 7)	CXD3526GG	0					
65	V-Line Color Shading Correction Setting (B_OFFSET 8)	CXD3526GG	0					
66	V-Line Color Shading Correction Setting (B_OFFSET 9)	CXD3526GG	0					
67	V-Line Color Shading Correction Setting (B_OFFSET 10)	CXD3526GG	0					
68	V-Line Color Shading Correction Setting (B_OFFSET 11)	CXD3526GG	0					
69	V-Line Color Shading Correction Setting (B_OFFSET 12)	CXD3526GG	0					
70	Color Shading Correction ONÅ^OFF	CXD3526GG	1					
71	LampLifeTime						Read Only	
72	BaudRate		1				0;9600/ 1;19200/ 2;38400	
73	ShootOutMode		0				0;Normal/ 1;Shoot out1/ 2;Shoot out2	
	FAN CONTROL						Range	✻ Fan Voltage Adjustment [No. 74- No.78]
74	Fan Speed Mode	TempNode	0				0-3	0:Auto Fan Control 1:Min 2:Mid 3:Max
75	Fan1 Min Data	TempNode	50				0-127	
76	Fan2 Min Data	TempNode	75				0-127	
77	Fan1 Max Data	TempNode	224				128-255	
78	Fan2 Max Data	TempNode	224				128-255	
79	Temp Low	TempNode	37				10-80	
80	Temp High	TempNode	45				30-80	
81	Fan1 Temp Error	TempNode	52				30-80	
82	Fan2 Temp Error	TempNode	47				30-80	
83	OverTempCount	TempNode	5				1-9	
84	SensorErrorCount	TempNode	5				1-9	
85	TempDeltaErrorCount	TempNode	5				1-9	
86	TempDeltaEnableRange	TempNode	80				48-160	48: 3ºC - 160: 10ºC 0.0625ºC/step
87	Sampling	TempNode	4				3-9	3:1.5sec - 9:4.5sec 0.5sec/step
88	Cooling Time	TempNode	3				0-6	n x 30 sec.
89	InitialLevel	TempNode	170				80-255	
90	InitialTime	TempNode	1				1-30	
91	IgnoreTempFail	TempNode	3				1-5	
92	Highland Mode	TempNode	0				0-1	
93								
	KEY CONTROL						Range	
95	KeyControlPermitation		0				0.2	0: No key prohibtion, 1: RC key prohibition 2: Projector key prohibition
	VPC3230		PC	YCbCr	NTSC	PAL		
96	Notch Filter Select	VPC3230	N/A		3	3		
97	diagonal dot reduction	VPC3230	N/A		1	1		
98	horizontal differential gain	VPC3230	N/A		3	3		
99	vertical differential gain	VPC3230	N/A		2	2		
100	vertical peaking gain	VPC3230	N/A		7	7		
101	AFC other1	VPC3230	N/A		540	540		
102	AFC other2	VPC3230	N/A		536	536		
103	Horizontal PeakingFilter	VPC3230	N/A		1	1		
104	Peaking Gain	VPC3230	N/A		2	2		
105	peaking filter coring enable	VPC3230	N/A		0	0		
	AGC On/Off							
106	Horizontal Lowpass Filter	VPC3230	N/A		1	1		
107	Horizontal Lowpass Filter Chroma	VPC3230	N/A		0	0		
108	DOR	VPC3230	N/A		0	0		
109	COR	VPC3230	N/A		0	0		
110	SGAIN	VPC3230	N/A		35	29		
	SHIPMENT							
112	Shipment setting		0				Restore the user control data to the initial value when this value changes 0 to 1.	
	VPC3230 for SCART							
120	Brightness of the RGB/YUV	VPC3230	N/A		68	68	* For SCART input	
121	Contrast of the RGB/YUV	VPC3230	N/A		32	32		
	VPC3230							
125	ADJUST	VCP3230	N/A				Read Only	
126	DVCO	VCP230	N/A		-720			
	LAMP USE TIME							
130	Lamp use time in hours							

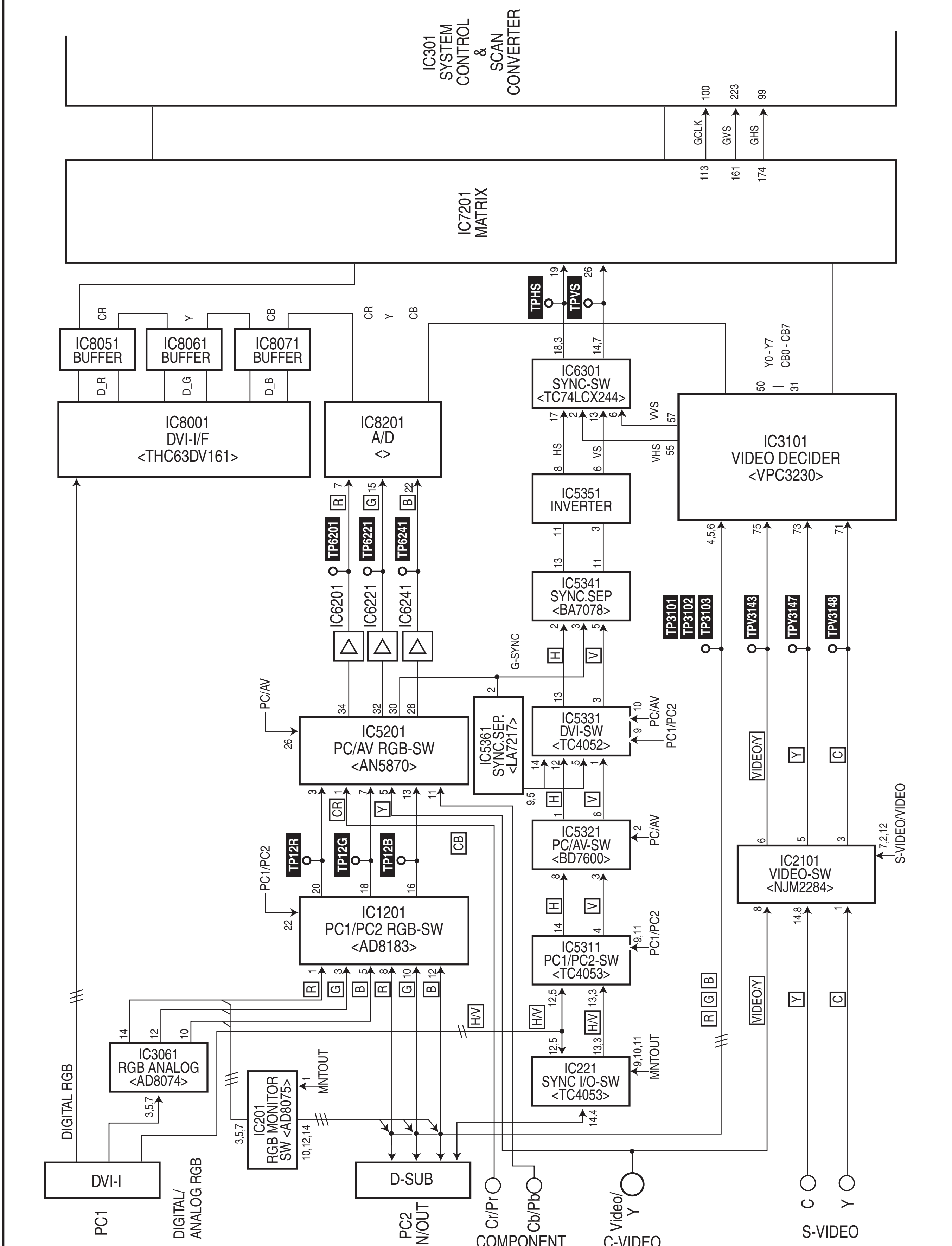
Item No.	Name	Device	Initial				Detail
			PC	YCbCr	Video		
					NTSC	PAL	
131	Lamp use time in min.						
	ADC						
272	REDGAIN	AD9884	180	212	N/A		
273	GRNGAIN	AD9884	180	212	N/A		
274	BLUGAIN	AD9884	180	212	N/A		
275	REDOFST	AD9884	32		N/A		
276	GRNOFST	AD9884	32		N/A		
277	BLUOFST	AD9884	32		N/A		
278	CLDUR	AD9884	28	28	N/A		
279	CLPLACE	AD9884	5	5	N/A		
	OverScan						
297	Expand Ratio (Vertical) 60Hz	PIXEL	N/A		13	N/A	Video and S-Video mode only.
298	Expand Ratio (Horizontal) 60Hz	PIXEL	N/A		18	N/A	
299	Position (Horizontal) 60Hz	PIXEL	N/A		494	N/A	
300	Position (Vertical) 60Hz	PIXEL	N/A		393	N/A	
301	Expand Ratio (Vertical) 50Hz	PIXEL	N/A			18	
302	Expand Ratio (Horizontal) 50Hz	PIXEL	N/A			27	
303	Position (Horizontal) 50Hz	PIXEL	N/A			502	
304	Position (Vertical) 50Hz	PIXEL	N/A			396	
305	Expand Ratio (Vertical) 480i	PIXEL	14		N/A		For Component mode
306	Expand Ratio (Horizontal) 480i	PIXEL	18		N/A		
307	Position (Horizontal) 480i	PIXEL	521		N/A		
308	Position (Vertical) 480i	PIXEL	393		N/A		
309	Expand Ratio (Vertical) 575i	PIXEL	20		N/A		For Component mode
310	Expand Ratio (Horizontal) 575i	PIXEL	25		N/A		
311	Position (Horizontal) 575i	PIXEL	515		N/A		
312	Position (Vertical) 575i	PIXEL	398		N/A		
313	Expand Ratio (Vertical) 480p	PIXEL	N/A	11	N/A		For Component mode
314	Expand Ratio (Horizontal) 480p	PIXEL	N/A	13	N/A		
315	Position (Horizontal) 480p	PIXEL	N/A	523	N/A		
316	Position (Vertical) 480p	PIXEL	N/A	386	N/A		
317	Expand Ratio (Vertical) 575p	PIXEL	N/A	22	N/A		For Component mode
318	Expand Ratio (Horizontal) 575p	PIXEL	N/A	29	N/A		
319	Position (Horizontal) 575p	PIXEL	N/A	520	N/A		
320	Position (Vertical) 575p	PIXEL	N/A	388	N/A		
321	Expand Ratio (Vertical) 720p	PIXEL	N/A	11	N/A		For Component mode
322	Expand Ratio (Horizontal) 720p	PIXEL	N/A	16	N/A		
323	Position (Horizontal) 720p	PIXEL	N/A	523	N/A		
324	Position (Vertical) 720p	PIXEL	N/A	384	N/A		
325	Expand Ratio (Vertical) 1035i	PIXEL	36		N/A		For Component mode and RGB HDTV 1035i
326	Expand Ratio (Horizontal) 1035i	PIXEL	14		N/A		
327	Position (Horizontal) 1035i	PIXEL	512		N/A		
328	Position (Vertical) 1035i	PIXEL	393		N/A		
329	Expand Ratio (Vertical) 1080i	PIXEL	15		N/A		For Component mode and RGB HDTV 1080i
330	Expand Ratio (Horizontal) 1080i	PIXEL	14		N/A		
331	Position (Horizontal) 1080i	PIXEL	512		N/A		
332	Position (Vertical) 1080i	PIXEL	392		N/A		
333	Expand Ratio (Vertical) 60Hz	PIXEL	13	N/A			RGB NTSC
334	Expand Ratio (Horizontal) 60Hz	PIXEL	18	N/A			
335	Position (Horizontal) 60Hz	PIXEL	511	N/A			
336	Position (Vertical) 60Hz	PIXEL	391	N/A			
337	Expand Ratio (Vertical) 50Hz	PIXEL	18	N/A			RGB PAL
338	Expand Ratio (Horizontal) 50Hz	PIXEL	27	N/A			
339	Position (Horizontal) 50Hz	PIXEL	512	N/A			
340	Position (Vertical) 50Hz	PIXEL	394	N/A			
341	Expand Ratio (Vertical) 50Hz	PIXEL	13		N/A		1080i_50Hz
342	Expand Ratio (Horizontal) 50Hz	PIXEL	13		N/A		
343	Position (Horizontal) 50Hz	PIXEL	508		N/A		
344	Position (Vertical) 50Hz	PIXEL	387		N/A		
	M62393						
350	Light Adjustment System	M62393P/FP	255				
351	R_VREF	M62393P/FP	255				
352	G_VREF	M62393P/FP	255				
353	B_VREF	M62393P/FP	255				
	POWER MANAGEMENT						
354	Power management test Mode		0				0: Normal, 1: Test Mode

■ Chassis Block Diagrams

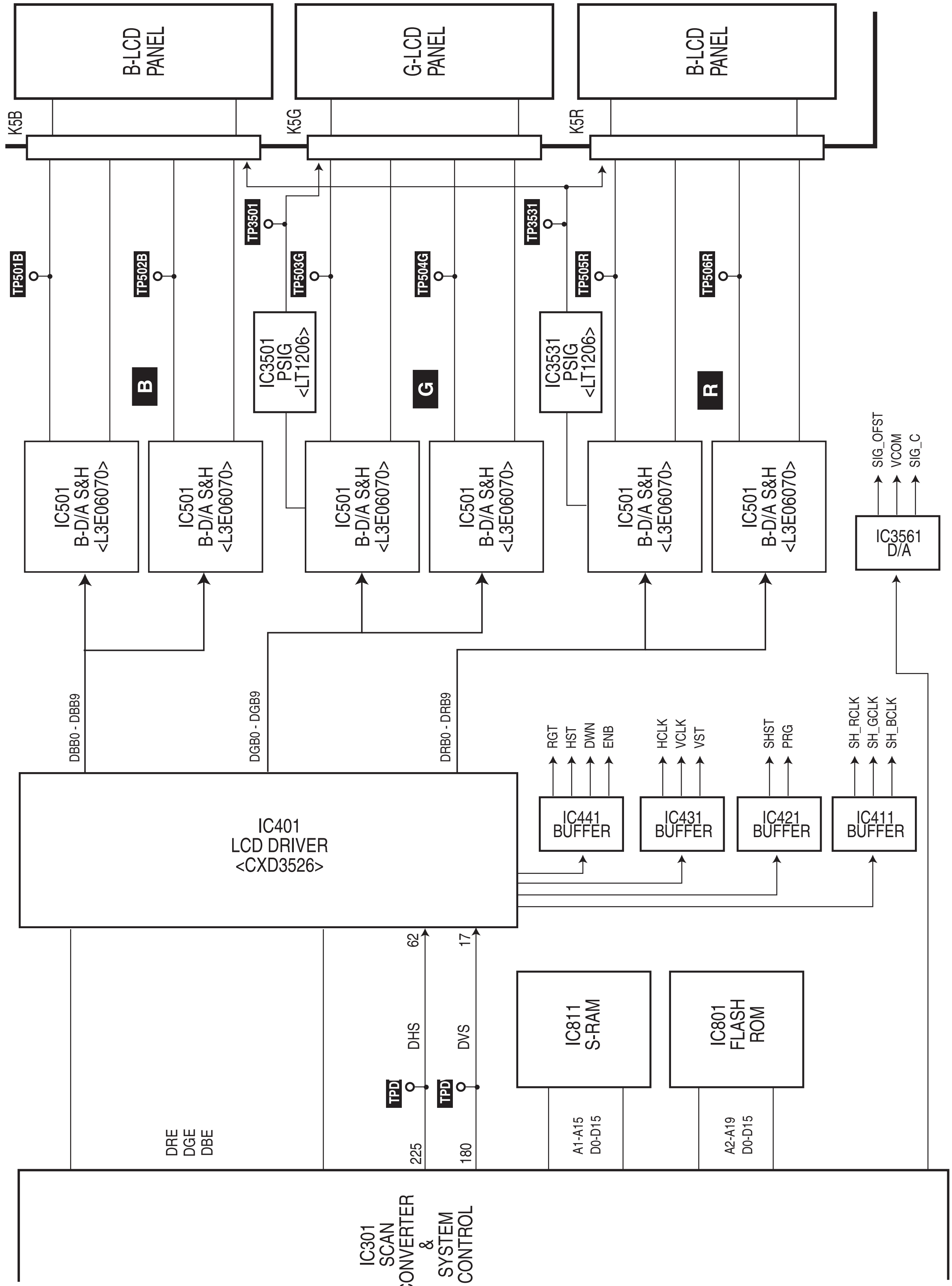
Chassis over view



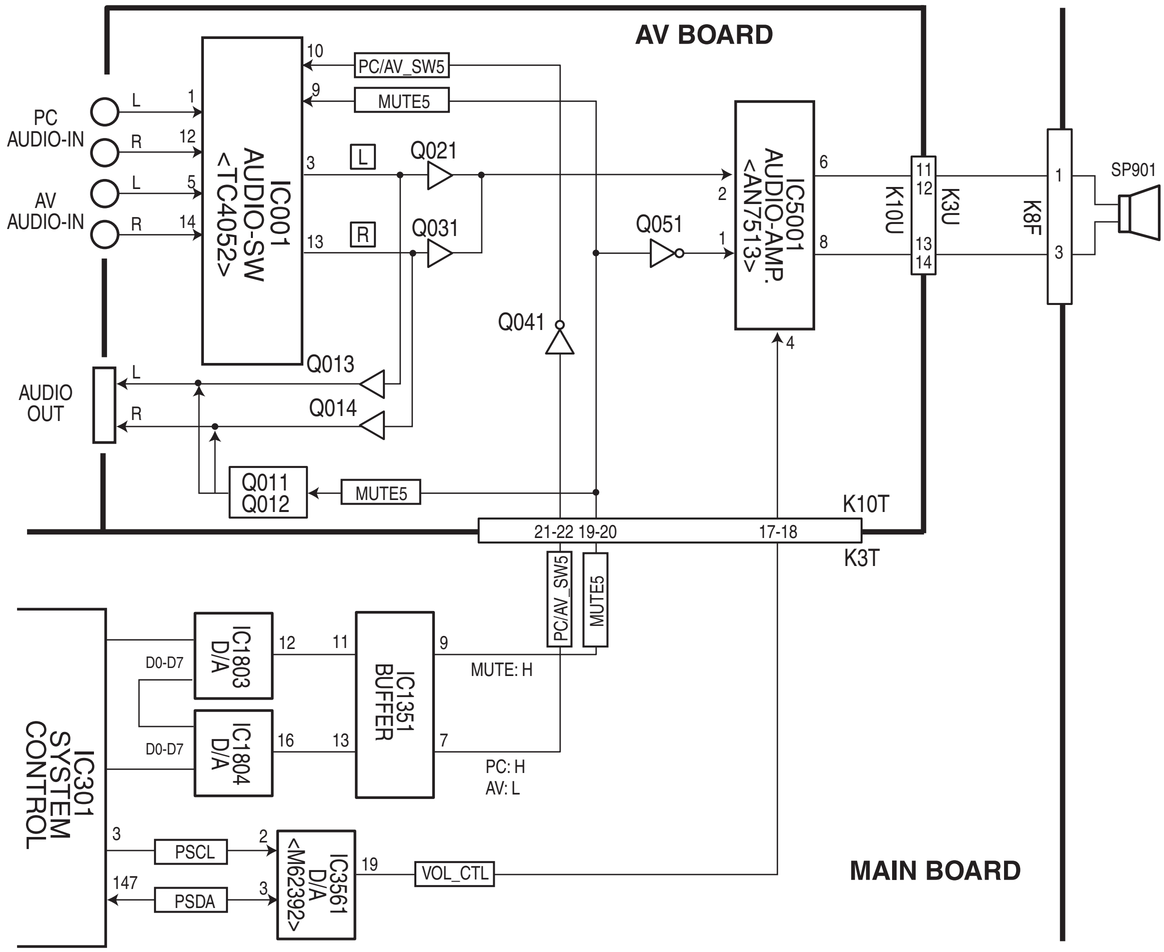
Inputs & video signal processing stage



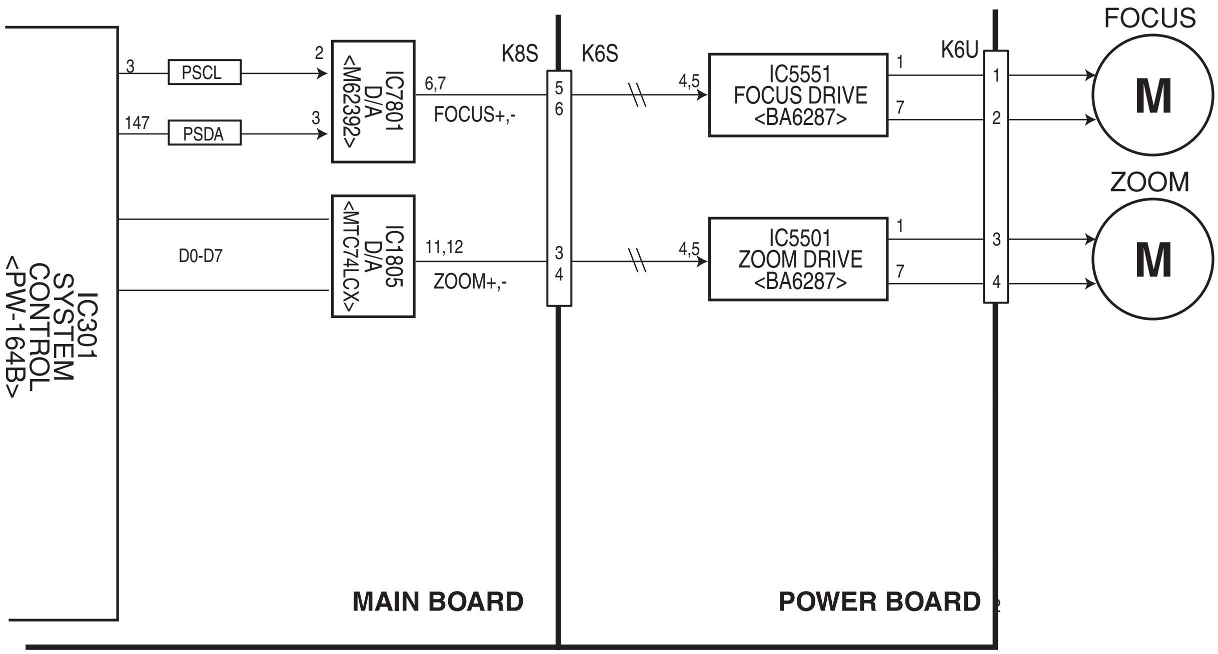
LCD panel driving stage



Audio signal processing circuit



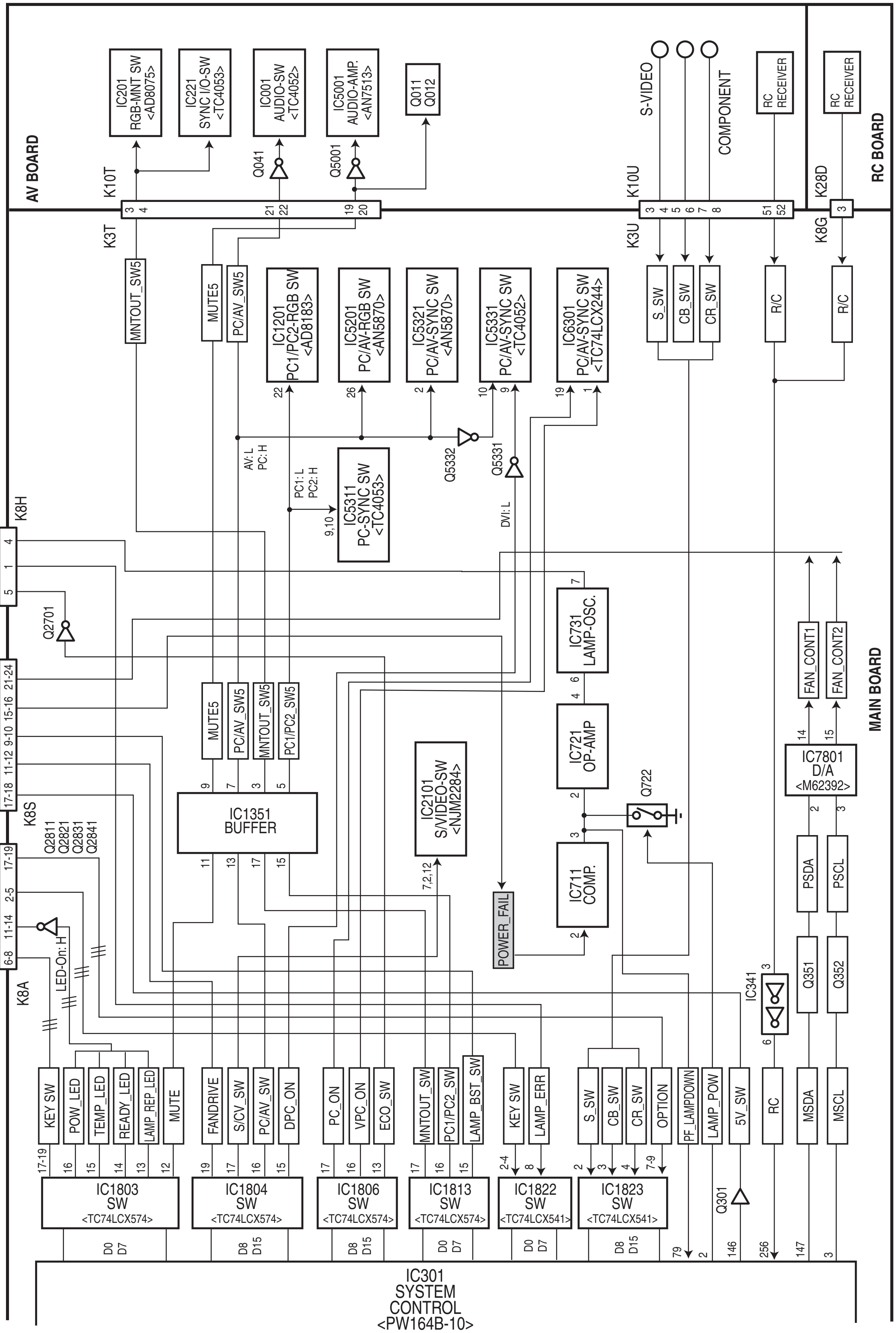
Motor driving circuit



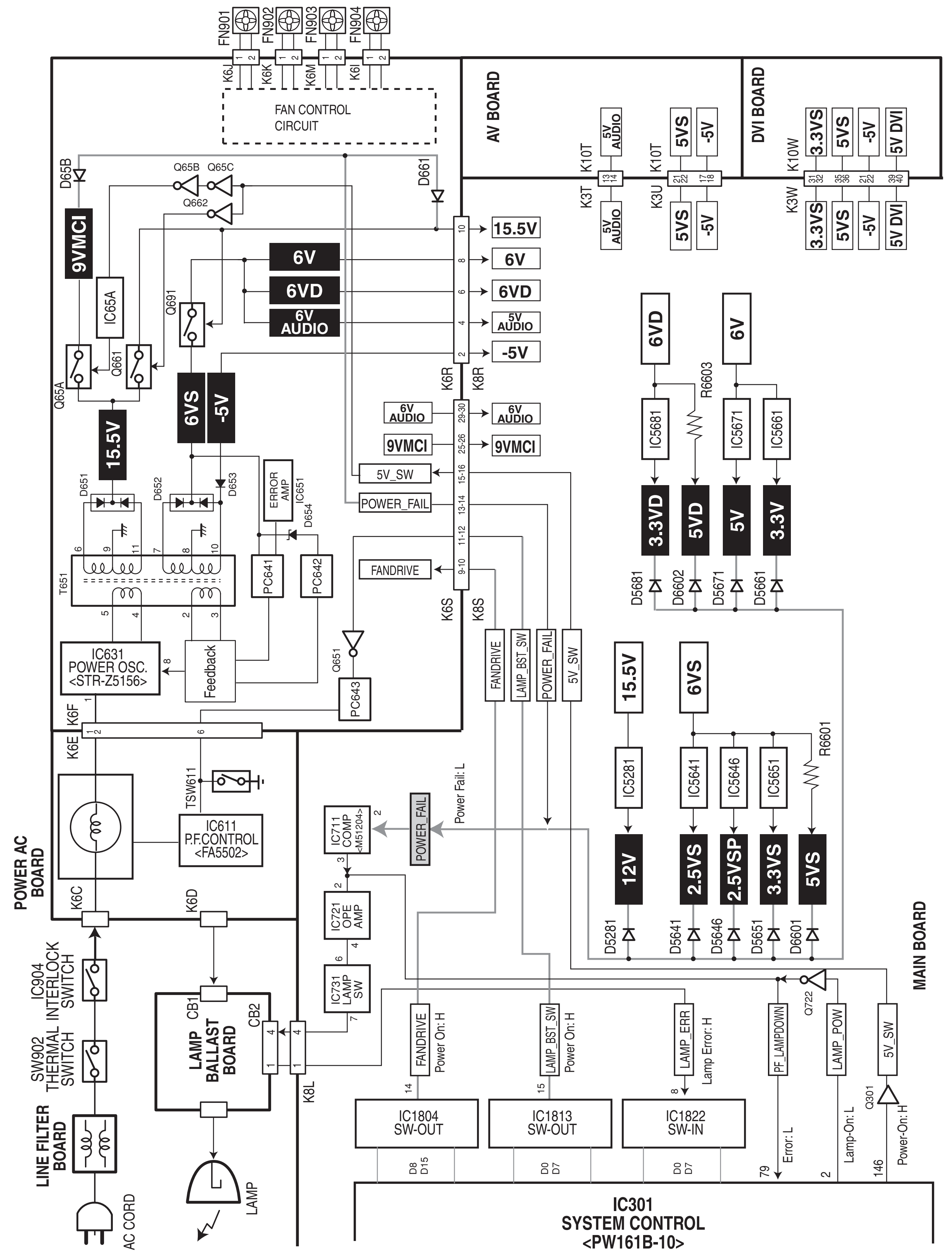
Logic Table of Drive ICs (IC5501,IC5551)

Input		Output		Operation
4	5	7	1	
H	L	L	H	Forward drive
L	H	H	L	Reverse drive
H	H	L	L	Braking Mode
L	L	Open	Open	Standby Mode

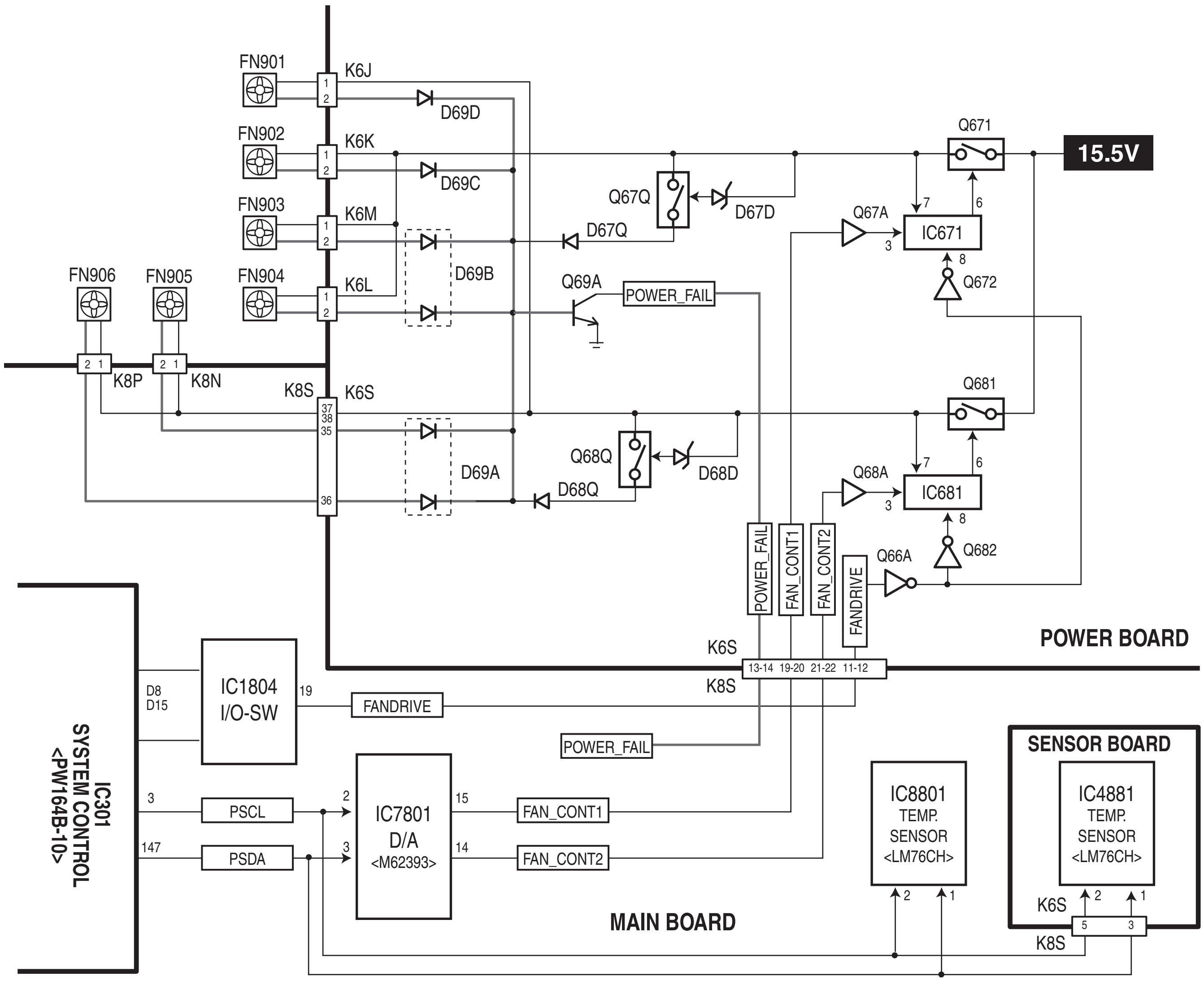
System controls



Power supply & protection circuit



Fan controlcircuit



■ Troubleshooting

No Power

This projector provides a function which can be specified a defective area simply by indicating the LEDs on the control panel. Connect the AC cord and press the Power button once and then check the LED indication.

- When all the LED indicators are not lighting, the symptom indicates that the primary power supply circuit does not operate properly. Check the power primary circuit and parts as follow;

AC cord
F601 (Fuse)
Line filter board
SW902 (Thermal sw.) ......short in normal
SW902 opens when the surrounding temperature of the switch exceeds 100°C.
SW904 (Interlock sw.) ......short in normal
Check the lamp cover is fixed firmly. The projector cannot turn on with lamp cover removal.

- When the WARNING TEMP indicator (red) is flashing, the symptom indicates that the projector detected an abnormal temperature risen inside the projector. Check the air filters and remove the object near the intake and exhaust fan openings, and wait until the WARNING TEMP indicator flashing stops, and then try to turn on the projector.

The internal temperature is monitored by sensor ICs, IC4801 on the Temp board and IC8801 on the Main board.

- When both of the TEMP WARNING (red) and READY (green) indicators are flashing at the same time, the symptom indicates that the projector detected an abnormality in the cooling fan operation or in the power supply secondary circuits. Check fan operation and power supply lines, and the driving signal status.

An abnormality occurs on the secondary power supply;
Check power supplies 15.5V, 6VS, 5VS, -5V. PF_LAMPDOWN signal (Error: L) is sent to pin 79 of IC301when the power error occurs.PF_LAMPDOWN signal is output from pin 3 of IC711 driven by POWER_FAIL (Error:L) signal on pin 2. When IC301, system control, detect s“L” on pin 79, IC301 sets the projector into the standby mode and indicates error mode with the LEDs flashing.

An abnormality occurs on the fans operation;
Check FN901, FN902, FN903, FN904, FN905, FN906.

An abnormality occurs on the power failure detection circuit;
Check Q69A, Q68P, Q87P, D68P, D67P on the power board, IC711, and Q722 on the Main board.

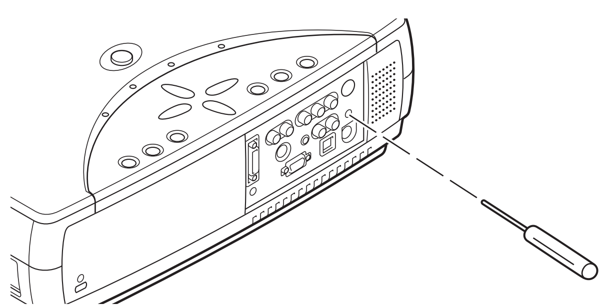
An abnormality occurs on the drive signals;
5V_SW signal (Power-on: H) is output from pin 146 of IC301 to Q661, IC65A through Q301 on the Main board and Q662, Q65B and Q65C on the Power board.
FANDRIVE signal (Power-on: H) is output from pin 14 of IC1804 to IC671 and IC681 through Q672 and Q682 on the Power board.
LAMP-BST-SW signal (Power-on: H) is output from pin 15 of IC1813 to IC611 on the P.F. board through Q651 and PC643 on the Power board.
LAMP_POW signal (Power-on: L) is output from pin 2 of IC301 to lamp ballast board through the lamp switch circuit, IC711, IC721 and IC731.

- When the POWER indicator (red) is lighting, the symptom indicates that the projector detected an abnormality in the circuit but is not specified error. Check the following;

Lamp cannot turn on, check following signals;
LAMP_ERR signal (Error: H) is sent from the lamp ballast board and input to pin 8 of IC1822.
LAMP_POW signal (Power-on: L) is output from pin 2 of IC301 to lamp ballast board through the lamp switch circuit, IC711, IC721 and IC731.

Reset switch

The microprocessor inside the projector may occasionally malfunction and does not allow any controls. In this case, press the reset switch on the rear panel with a sharp tool to restart the projector.



No Picture

Check following steps.

No picture with all of input sources — Yes →

Check signal processing stage and LCD driving stage;
- Check RGB S&H signals at test points TP501B, TP502B, TP503G, TP504G, TP505R, TP506R.
- Check PSIG signals at test points TP3501 and TP3531.
- Check power supply circuit 15.5V SWD and peripheral circuit.
- Check ICs IC501, IC531, IC561, IC1501, IC1531, IC1561, IC3501, IC3531, IC401, IC301 and peripheral circuits.

No ↓

No picture with PC1[DVI digital] input source — Yes →

Check DVI interface stage;
- Check DVI receiver, IC8001, buffer ICs IC8051, IC8061, IC8071 and peripheral circuit.
- DVI switch signal, DPC_ON (DVI: L), is output from pin 15 of IC1804 and applied to IC5331 through Q5331.

No ↓

No picture with PC1 [DVI analog] input source — Yes →

Check PC source selecting stage;
- Check IC3061, RGB buffer, and peripheral circuit on the DVI board.
- Check IC1201, PC1/PC2 RGB SW, and IC5311, PC1/PC2 SYNC-SW and peripheral circuit.
- PC1/PC2_SW5 signal (PC1: L) is applied on pin 22 of IC1201, and pins 9, 11 of IC5311, and output from pin 16 of IC1813 through IC1351, buffer IC.

No ↓

No picture with PC2 [VGA analog] input source — Yes →

Check PC source selecting stage;
- Check IC221, Sync sw, and peripheral circuit on the AV board. Check MNTOUT_SW5 signal (PC2-Monitor-Out:H) is applied on pin 1 of IC201 and pins 9, 10, 11 of IC221 on the AV board and output from pin17 of IC1813 through IC1351, buffer IC.
- Check IC3101, Video decoder, and IC7201, matrix and peripheral circuit.
- Check IC1201, PC1/PC2 RGB SW, and IC5311, PC1/PC2 SYNC-SW and peripheral circuit.
- PC1/PC2_SW5 signal (PC1: L) is applied on pin 22 of IC1201, and pins 9, 11 of IC5311, and output from pin 16 of IC1813 through IC1351, buffer IC.

No ↓

No picture with all of computer input sources — Yes →

Check PC/AV source selecting stage and processing stage;
- Check IC5201, PC/AV RGB SW, and IC8201, A/D conversion and peripheral circuit.
- Check IC5321, IC5331, PC/AV Sync selection IC, and peripheral circuit.
- PC/AV_SW5 signal (PC: H) is applied on pin 26 of IC5201, pin 2 of IC5321, and pin 10 of IC5331, and output from pin 16 of IC1804 through IC1351, buffer IC.

No → Go to next page

From previous page

No picture with S-VIDEO input source

Yes →

Check AV source selecting stage;
- Check S-video signal (Y/C) on the AV board.
- Check IC2101, Video/S-Video-sw, and IC3101, Video decoder, and peripheral circuit.
- S/CV-SW signal (S-Video:H) is applied on pins 2, 7 and 12 of IC2101, output from pin 17 of IC1804.

No ↓

No picture with Component input source

Yes →

Check AV source selecting stage;
- Check component signal (Y/Cr,Pr/Cb,Pb) on the AV board.
- Check IC5201, PC/AV RGB SW, and IC8201, A/D conversion and peripheral circuit.
- Check IC2101, Video/S-Video-sw, and IC3101, Video decoder, and peripheral circuit.
- PC/AV_SW5 signal (PC: H) is applied on pin 26 of IC5201, output from pin 16 of IC1804 through IC1351, buffer IC.

No ↓

No picture with video input source

Yes →

Check AV source selecting stage;
- Check composite video signal (Video) on the AV board.
- Check IC2101, Video/S-Video-sw, and IC3101, Video decoder, and peripheral circuit.
- S/CV-SW signal (Video:L) is applied on pins 2, 7 and 12 of IC2101, output from pin 17 of IC1804.
- Check IC2101, Video/S-Video-sw, and IC3101, Video decoder, and peripheral circuit.
- PC/AV_SW5 signal (PC: H) is applied on pin 26 of IC5201, output from pin 16 of IC1804 through IC1351, buffer IC.

No Sound

Check following steps.

Is the audio signal observed on the AUDIO-OUT terminal?

No → Check PC/AV-audio switching circuit.
Check IC001, audio-sw IC, and peripheral circuit. PC/AV_SW5 (PC:L) signal is applied on pin 10 of IC001 through Q041. MUTE5 signal (Mute:H) is applied on pin 9 of IC001 output from pin 12 of IC1803 through IC1351, buffer IC.

Yes ↓

Is the audio signal observed on pin 6 of IC5001?

No → Check Audio amp.and control circuit.
Check IC5001, audio-amp IC, and peripheral circuit. MUTE5 signal (Mute:L) is applied on pin 1 of IC5001, output from pin 12 of IC1803 through IC1351, buffer IC. VOL_CTL signal is applied on pin 4 for volume control, sent from pin 19 of IC3561.

Yes → Check audio output circuit.
Check speaker, connection of the terminals “K10T”, “K8F”.

Lens Motor Problems

Check following steps.

Both of ZOOM and FOCUS motors are not functioning.

Yes → Check the power supply (7VMCI) circuit, IC5501 and IC5551 and peripheral circuit. Check Key SW board.

No ↓

Only ZOOM motor is not functioning.

Yes → Check the ZOOM motor control circuit.
Zoom motor is controlled by signal ZOOM +, - output from pins 1 and 7 of IC5501. These control signals are driven by IC301, system control IC, and applied to pins 4 and 5 of IC5501 through the IC1804, I/O-sw IC.

No ↓

Only FOCUS motor is not functioning.

Yes → Check the FOCUS motor control circuit.
Focus motor is controlled by signal FOCUS +, - output from pins 1 and 7 of IC5551. These control signals are driven by IC301, system control IC, and applied to pins 4 and 5 of IC5551 through the IC7801, D/A IC.

No → Check logic table of motor drive ICs, IC5501, IC5551.

Logic Table of IC5501/IC5551

Input		Output		Operation
4	5	7	1	
H	L	L	H	Forward drive
L	H	H	L	Reverse drive
H	H	L	L	Braking
L	L	-	-	Stand by

■ Control Port Functions

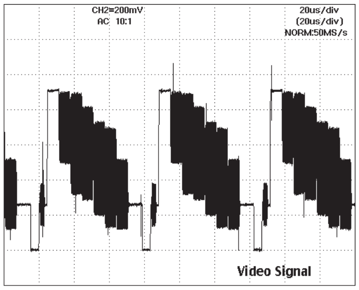
● System Control & I/O Port Table

IC Ref. No	Pin/Name	I/O	Signal Name	Function	Note
IC301	PortA0	I/O	ROMWEL	For ICE	
	PortA1	I/O	ROMWEH	For ICE	
	PortA2	I/O	BOOTWE	For ICE	
	PortA3	I/O	DDC_CK	NVRAM I2C CLK for DDC	
	PortA4	O	5V_SW	Power ON/OFF	MainPower-ON:High
	PortA5	I	MT_DAT	Judge 15KHz system	15KHz:High
	PortA6	O	IO_Reset	Initialize I/O	Fixed Low
	PortA7	O	LAMP_POW	Lamp-ON	
	PortB0	I/O	M_SCL	IIC CLK	
	PortB1	I/O	M_SDA	IIC DATA	
	PortB2	I/O	VIEWER_ON	Not used	
	PortB3	I	PF_LAMPDOWN	PowerFail Monitor	
	PortB4	I/O	DDC_DT	NVRAM I2C DATA for DDC	
	PortB5	I/O	CARD_IN	Not used	
	PortB6	I/O	SCDT	Not used	
	PortB7	I/O	W_LAN_IN	Not used	
IC1803	12	O	Mute	Mute ON/OFF	ON:High
	13	O	LAMP_REP_LED	Lamp Replace LED Drive	
	14	O	READY_LED	Ready LED Drive	
	15	O	TEMP_LED	Temp Warning LED Drive	
	16	O	POW_LED	Power LED Drive	
	17	O	KO3	Main Key Switch	
	18	O	KO2	Main Key Switch	
	19	O	KO1	Main Key Switch	
IC1804	12	O	CG_Filter	Not used	
	13	O	VHDREN	Micronas chip Enable	Enable:High
	14	O	VFIELD_SW	Vfield PC/AV Selection	AV:High
	15	O	DPC_ON	DVI/PC Selection	DVI:Low
	16	O	PC/AV_SW	PC/AV Selection	PC:High
	17	O	S/CV_SW	Video/S-Video Selection	Video:Low
	18	O	MCLK_SW	Master CLK ON/OFF	ON:High
	19	O	FanDrive_SW	Fan Drive ON/OFF	ON:High
IC1805	12	O	ZOOM-	Zoom-	ON:Low
	13	O	ZOOM+	Zoom+	ON:Low
	14	O	MOUSE/CPU_SW	Mouse Enable ON/OFF	Enable:Low
	15	O	PCLK_ON	AD9884 CLK ON/OFF	ON:Low
	16	O	VCLK_ON	Micronas CLK ON/OFF	ON:Low
	17	O	MT_RESET	Matrix Enable ON/OFF	Enable:High
	18	O	MOUSE/RESET	Mouse Reset	Reset:Low
	19	O	DCLK_ON	DVI/PC Selection	DVI:Low
IC1806	12	O	ADPW	AD9884 ON/OFF	ON:High
	13	O	ECO_SW	Normal/Eco Selection	Eco:High
	14	O	DCLK_SW	CXD3526 CLK ON/OFF	ON:High
	15	O	USB_EN	Not used	
	16	O	VPC_ON	Sync select ON/OFF for Micronas	ON:Low
	17	O	PC_ON	Sync select ON/OFF for AD9884	ON:Low
	18	O	AC_FILT	Filter ON/OFF for PS2	15KHz:High
	19	O	USB_RST	Not used	
IC1813	12	O	RCID_SW3	Remote Control ID1	
	13	O	RCID_SW2	Remote Control ID2	
	14	O	RCID_SW1	Remote Control ID3	
	15	O	LAMP_BST_SW	Boost ON/OFF	ON:High
	16	O	PC1/PC2_SW	PC1(RGB)/PC2(RGB) Selection	PC1(RGB):Low
	17	O	MNTOUT_SW	Monitor Out Selection	Monitor Out:Low
	18	O	CXD_WP	NVRAM Write Protect for CXD3526	Protect:High
	19	O	EDIDEN	DDC Projector/PC Selection	Projector:Low
IC1814	12	O			
	13	O			
	14	O			
	15	O	S/PRESET	Not used	

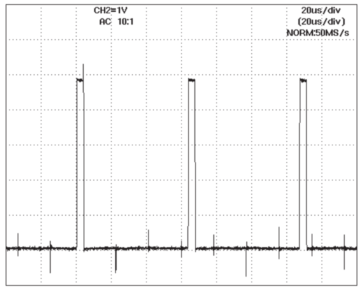
IC Ref. No	Pin/Name	I/O	Signal Name	Function	Note
	16	O	CTS	Not used	
	17	O	Not used	Not used	
	18	O	KEY_WE	Not used	
	19	O	DSINV_SW	Not used	
IC1822	2	I	KI1	Main Key Switch	
	3	I	KI2	Main Key Switch	
	4	I	KI3	Main Key Switch	
	5	I	KI4	Main Key Switch	
	6	I	M2/SEL0	Mouse Selection 0	
	7	I	M2/SEL1	Mouse Selection 1	
	8	I	LAMP_ERR	Lamp Error Monitor	
	9	I	USB_VBUS	Not used	
IC1823	2	I	S_SW	S-Video	
	3	I	CB_SW	Component	
	4	I	CR_SW	Component	
	5	I	CLK/SDATA	Not used	
	6	I	LAGO_SO	Not used	
	7	I	OPTION1	OEM Option	
	8	I	OPTION2	OEM Option	
	9	I	OPTION3	OEM Option	

■ Waveform

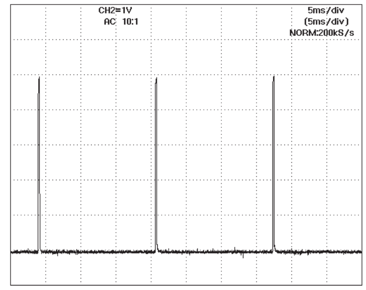
VIDEO-IN <TPV3143>



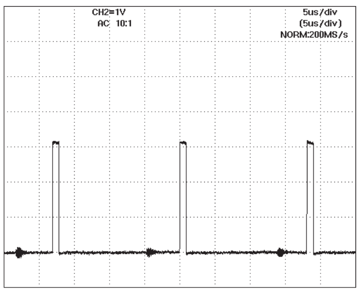
HS signal <TPHS>



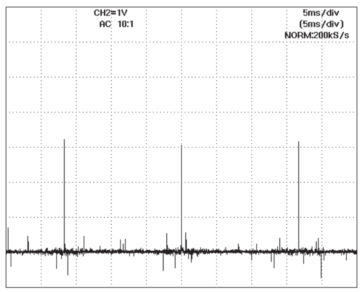
VS signal <TPVS>



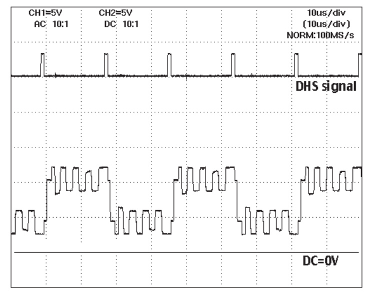
DHS signal <TPDHS>



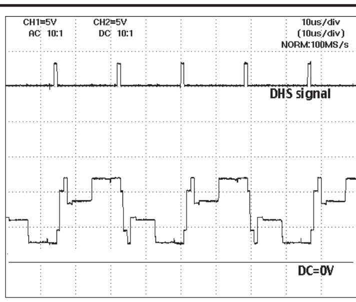
DVS signal <TPDVS>



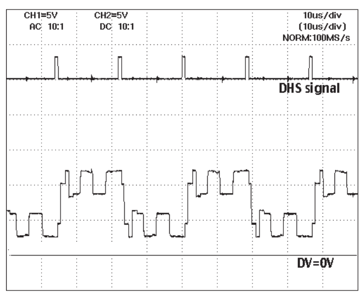
S&H-B <TP501B/TP502B>



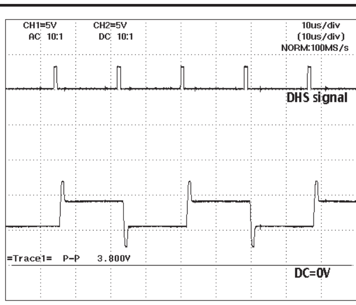
S&H-G <TP503G/TP504G>



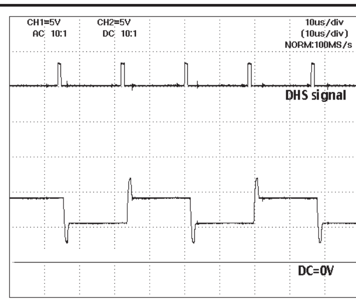
S&H-R <TP505R/TP506R>



PSIG <TP3501>



PSIG <TP3551>



■ Cleaning

After long periods of use, dust and other particles will accumulate on the LCD panel, prism, mirror, polarized glass, lens, etc., causing the picture to darken or color to blur. If this occurs, clean the inside of optical unit.

Remove dust and other particles using air spray. If dirt cannot be removed by air spray, disassemble and clean the optical unit.

Cleaning with air spray

1. Remove the cabinet top following to “Mechanical Disassemblies”.
2. Clean up the LCD panel and polarizing plate by using the air spray from the cabinet top opening.

Caution:
Use a commercial (inert gas) air spray designed for cleaning camera and computer equipment. Use a resin-based nozzle only. Be vary careful not to damage optical parts with the nozzle tip. Never use any kind of cleanser on the unit. Also, never use abrasive materials on the unit as this may cause irreparable damage.

Disassembly Cleaning

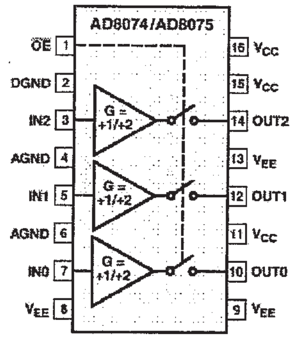
Disassembly cleaning method should only be performed when the unit is considerable dirty and cannot be sufficiently cleaned by air spraying alone.
Be sure to readjust the optical system after performing disassembly cleaning.

1. Remove the cabinet top and main units following to “Mechanical Disassemblies”.
2. Remove the optical base top following to “Optical Unit Disassemblies”. If the LCD panel needs cleaning, remove the LCD panel unit following to “LCD panel replacement”.
3. Clean the optical parts with a soft cloth. Clean extremely dirty areas using a cloth moistened with alcohol.

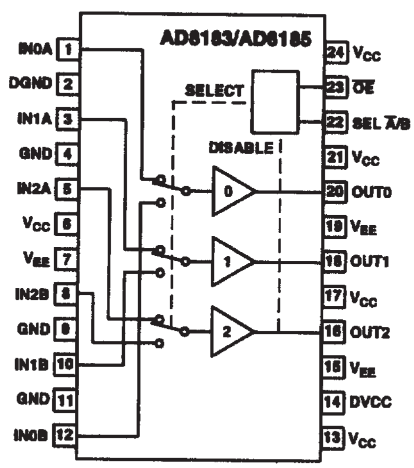
Caution:
The surface of the optical components consists of multiple dielectric layers with varying degrees of refraction. Never use organic solvents (thinner, etc.) or any kind of cleanser on these components.
Since the LCD panel is equipped with an electronic circuit, never use any liquids (water, etc.) to clean the unit. Use of liquid may cause the unit to malfunction.

■ IC Block Diagrams

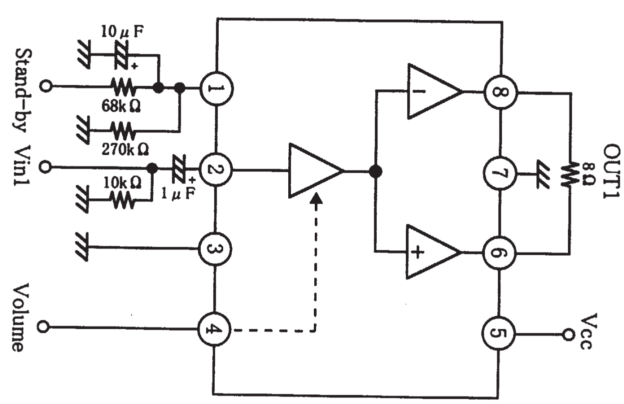
● AD8075 <Selector, IC201>



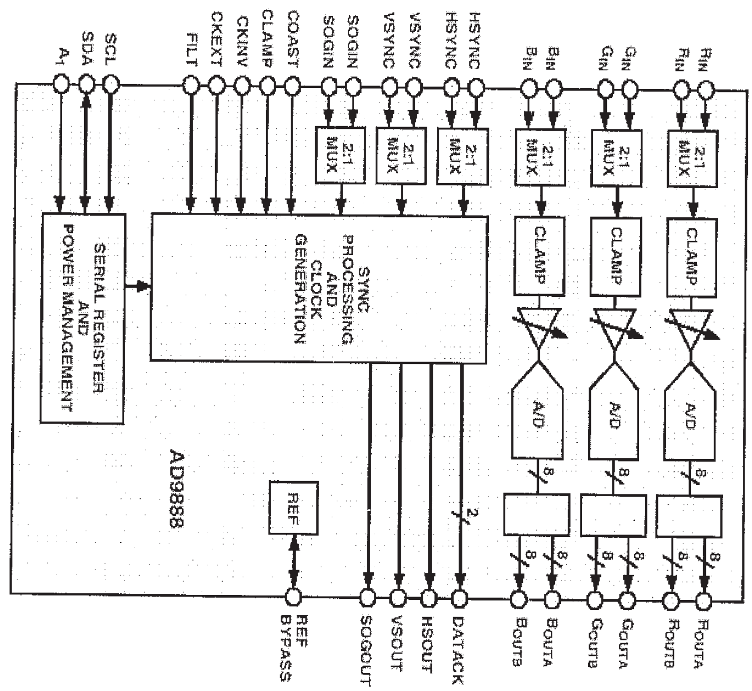
● AD8183ARU <Selector, IC1201>



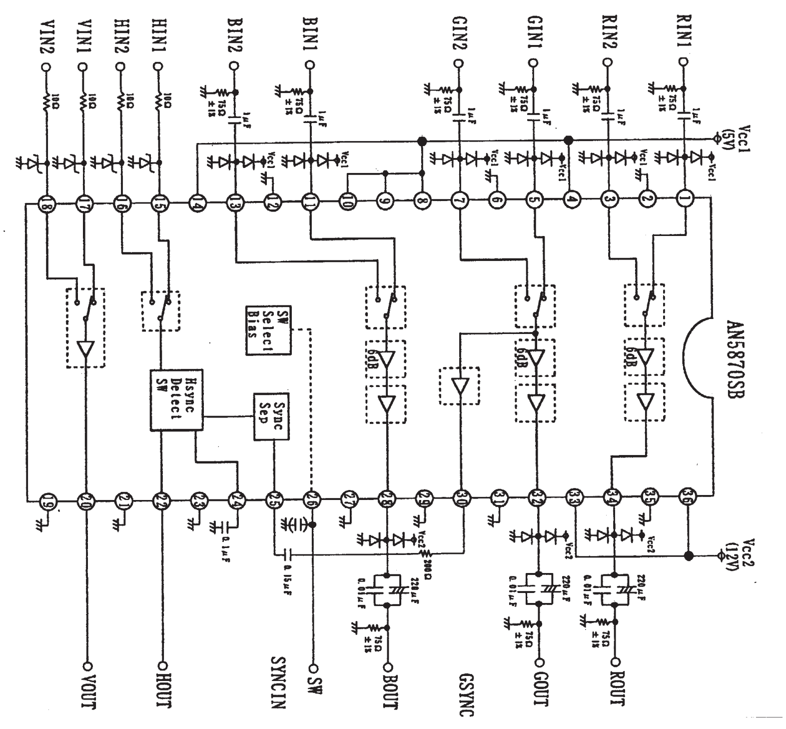
● AN7513 <Audio-Amp, IC5001>



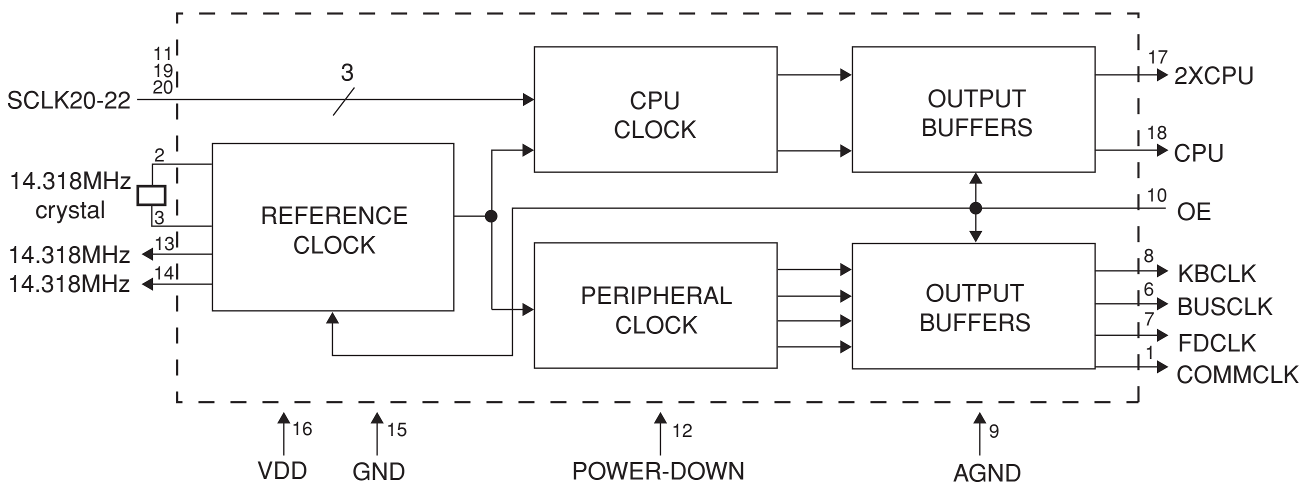
● AD9884AKS <A/D, IC8201>



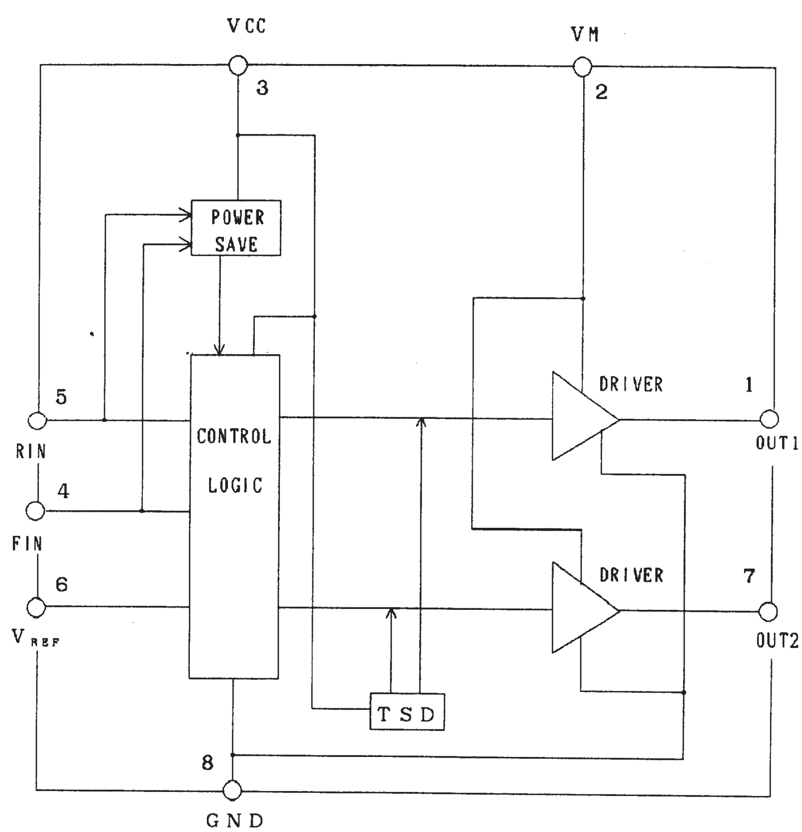
● AN5870SB <RGB-SW, IC5201>



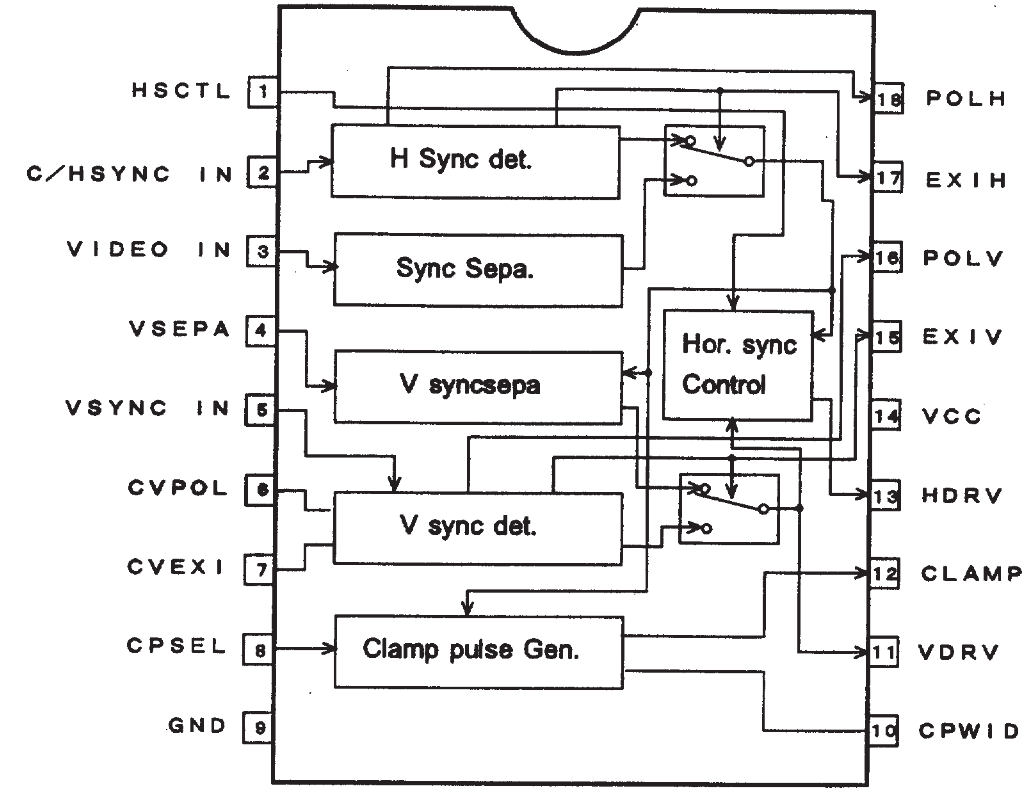
● AV9155C <Clock Driver, IC1301>



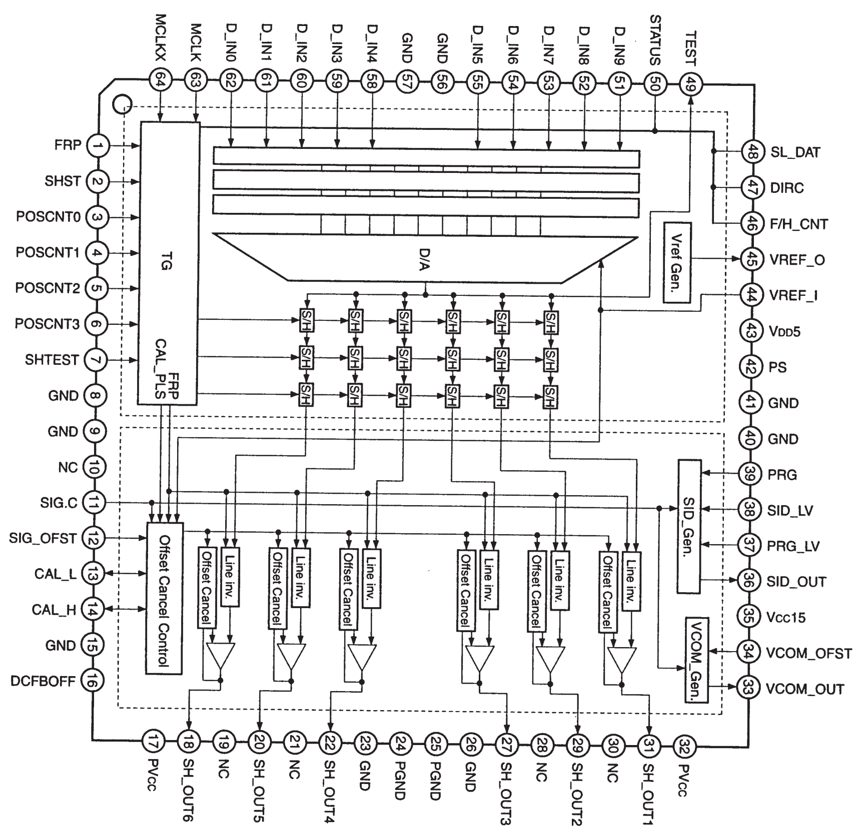
● BA6287 <Motor Drive, IC5501, IC5551, IC5561>



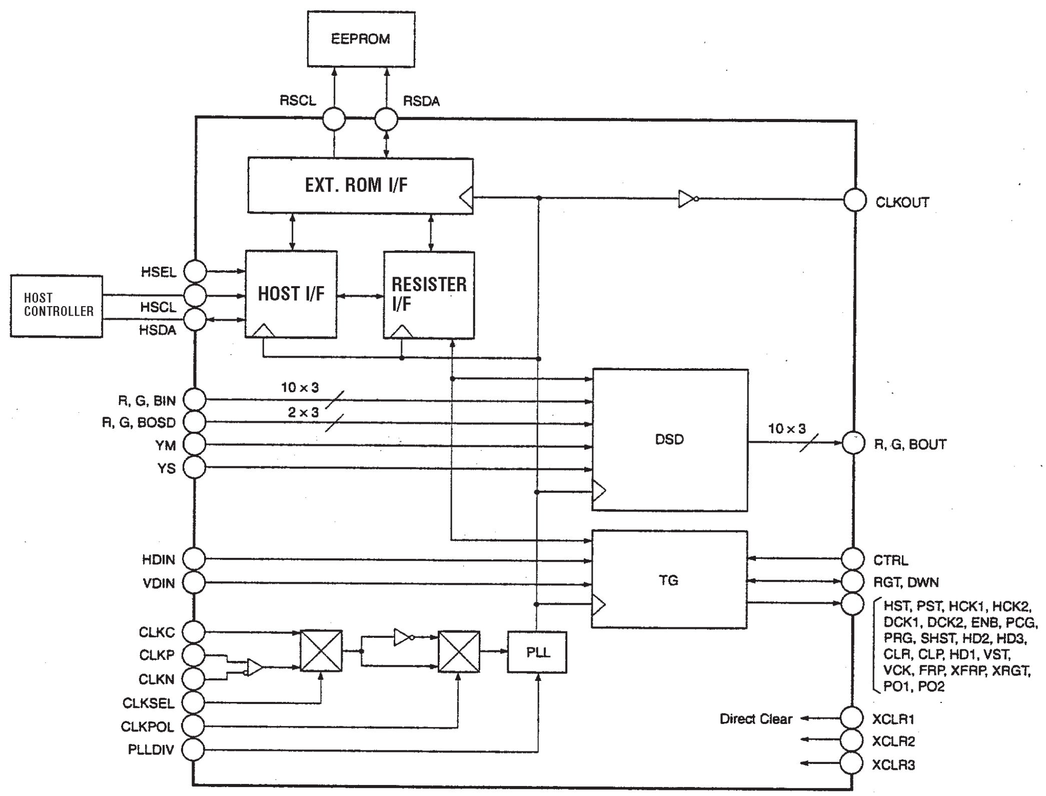
● BA7078 <Sync Separator, IC5341>



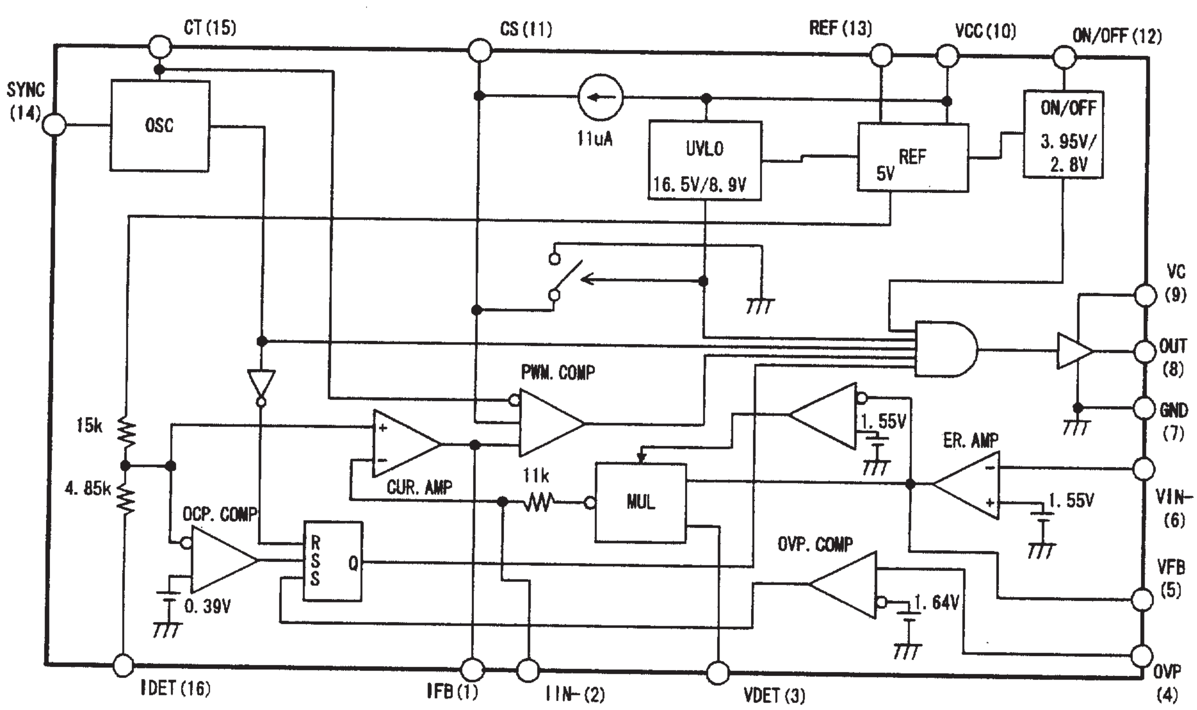
● CXA7000R <D/A, S/H-LCD Driver, IC501, IC1501, IC530, IC1531, IC561, IC1561>



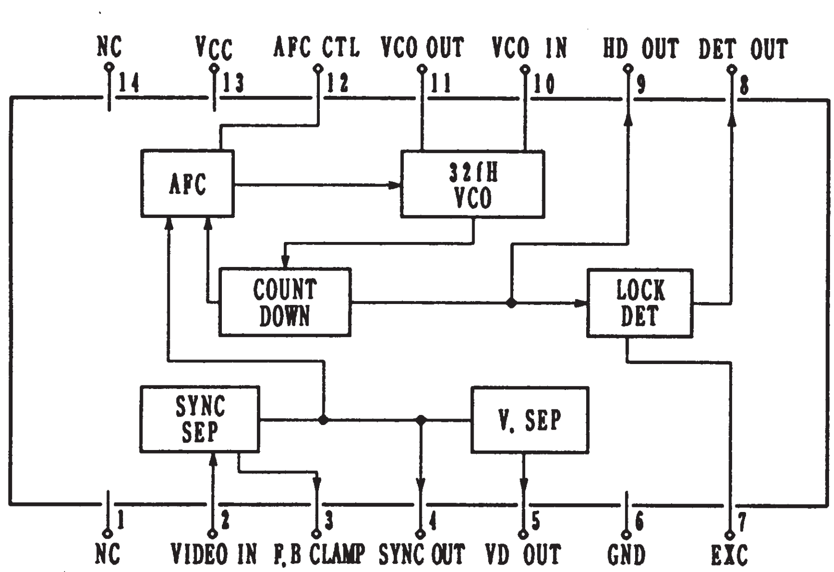
● CXD3526GG <LCD Driver, Timing Generator, IC401>



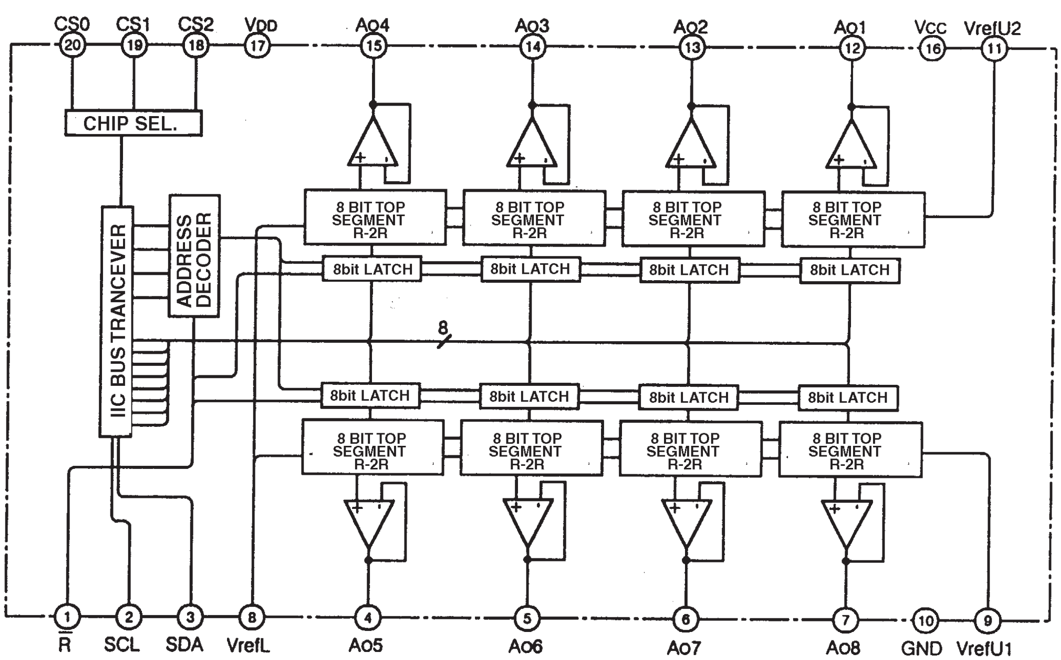
● FA5502 <P.F. Control, IC611>



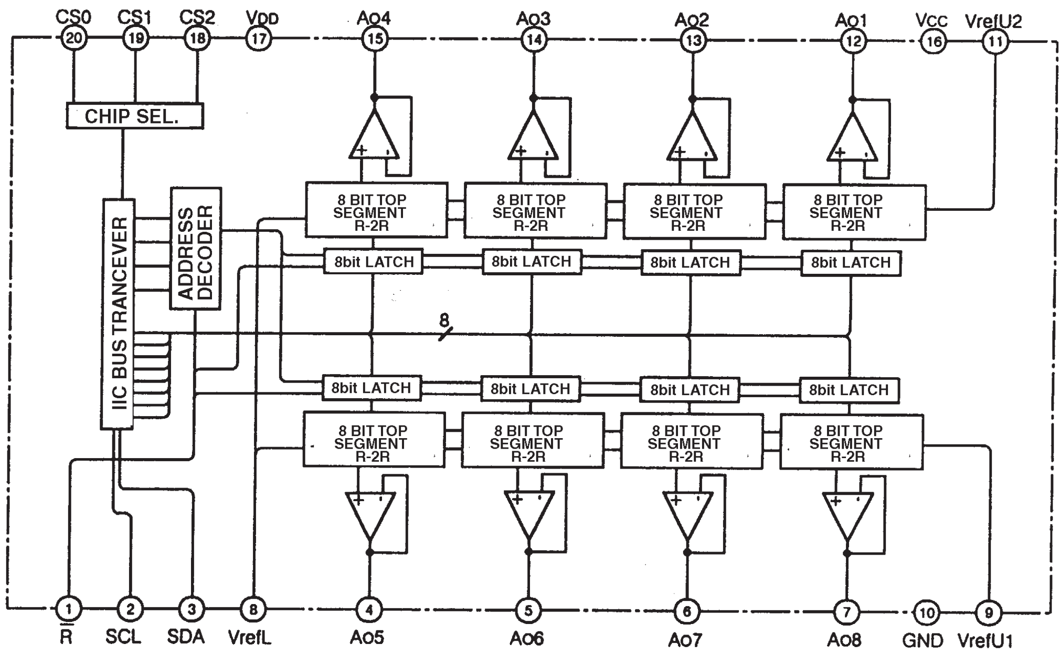
● LA7217 <Sync Separator, IC5361>



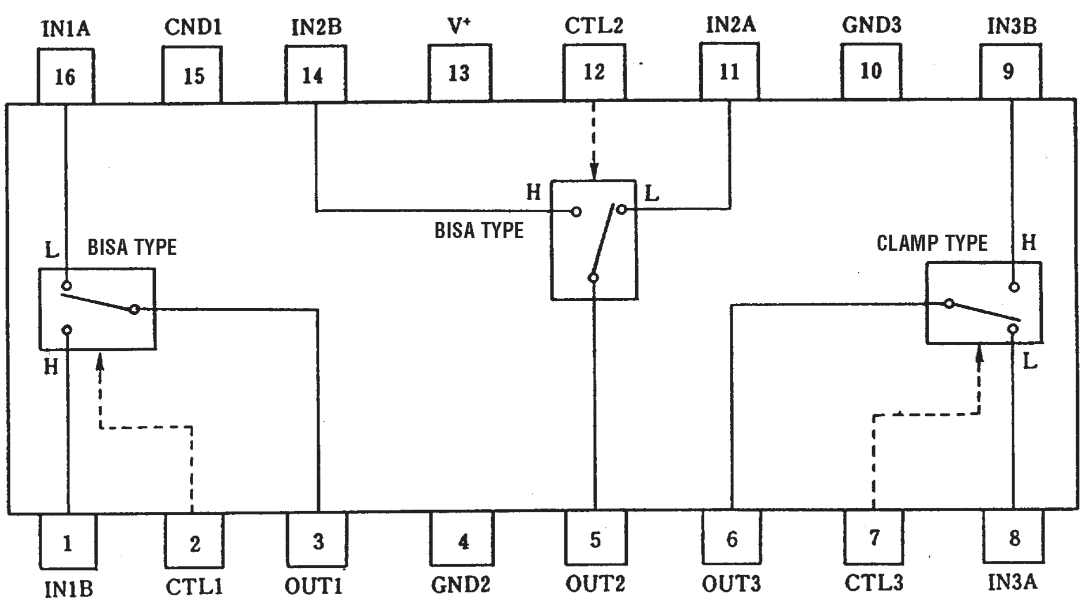
● M62392 <D/A, IC3561>



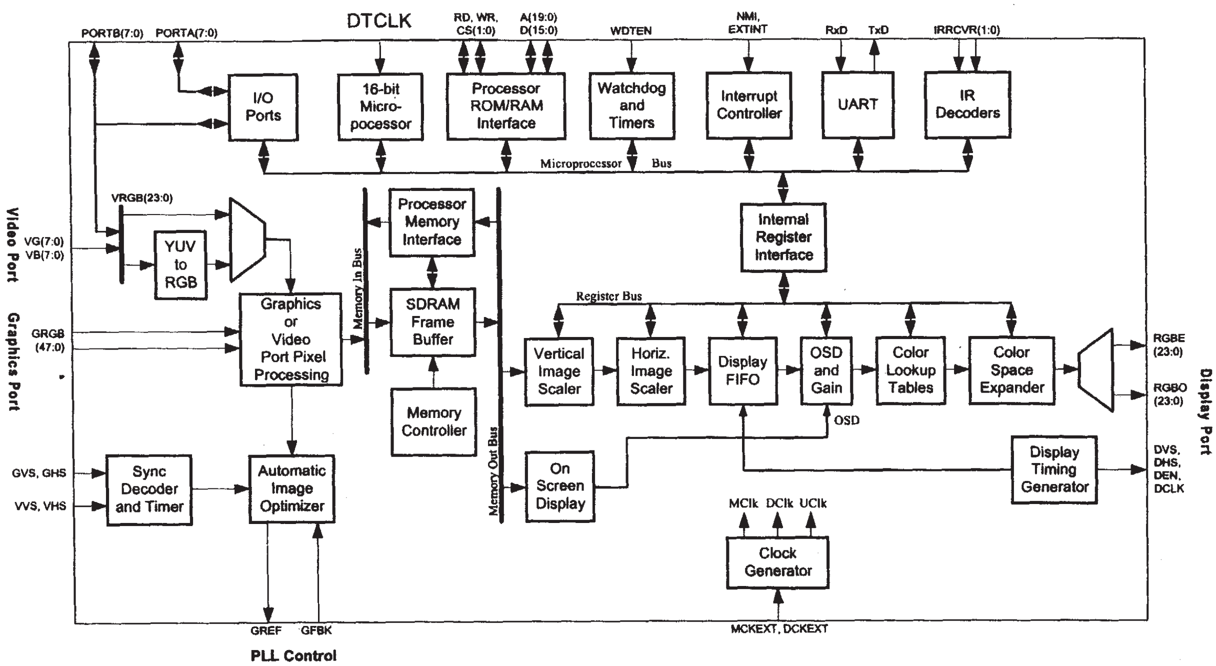
● M62393 <D/A, IC281, IC7801>



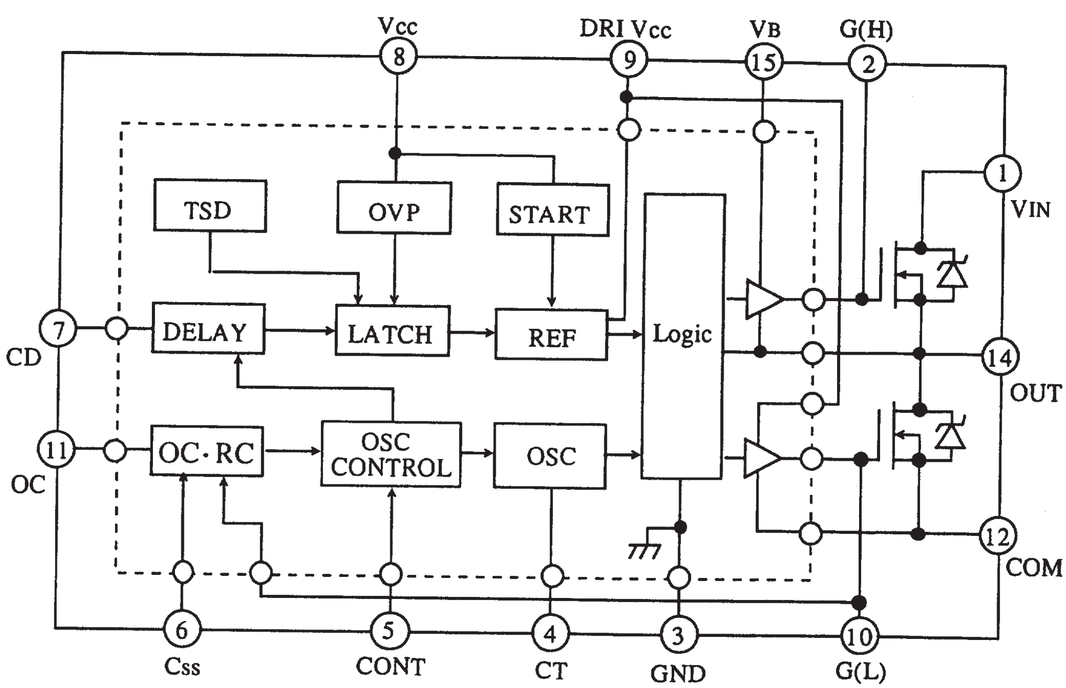
● NJM2284M <Switch, IC2101>



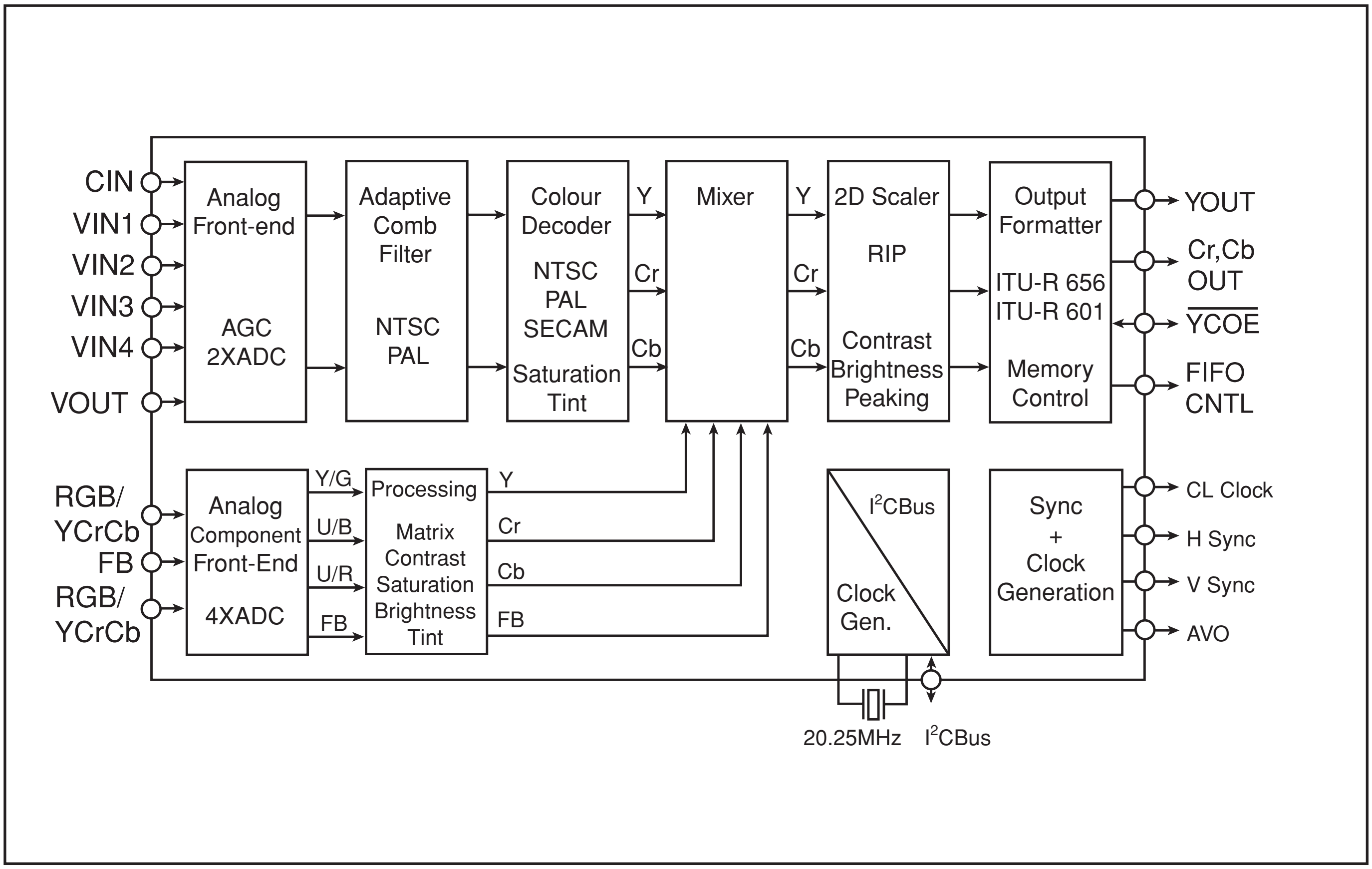
● PW164B-10 <System Control & Scan Converter, IC301>



● STR-Z2156 <Power Switching Control, IC631>



● VPC3230D <Video Decoder, IC3101>



■ Electrical Parts List

Product safety should be considered when a component replacement is made in any area of a projector. Components indicated by a ⚠ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

● Read Description in the parts list

Read description in the Capacitor and Resistor as follows:

CAPACITOR CERAMIC 100P K 50V

- 50V — Rated Voltage
- K — Tolerance Symbols:

Less than 10pF

A : Not specified	B : ±0.1pF	C : ±0.25pF
D : ±0.5pF	E : +0 -1pF	F : ±1PF
G : ±2pF	H : +0.1 -0pF	L : +0 -0.1pF
R : ±0.25 -0pF	S : +0-0.25pF	

More than 10pF

A : Not specified	B : ±0.1%	C : ±0.25%
D : ±0.5%	F : ±1%	G : ±2%
H : ±3%	J : ±5%	K : ±10%
L : ±15%	M : ±20%	N : ±30%
P : +100-0%	Q : +30-10%	T : +50-10%
U : +75-10%	V : +20-10%	W : +100-10%
X : +40-20%	Y : +150-10%	Z : +80-20%

- 100P — Rated value: P=pico farad, U=micro farad
- CERAMIC — Material:

CERAMIC........... Ceramic
MT-PAPER......... Metallized Paper
POLYESTER...... Polyester
MT-POLYEST..... Metallized Polyester
POLYPRO.......... Polypropylene
MT-POLYPRO.... Metallized Polypropylene
COMPO FILM..... Composite film
MT-COMPO........ Metallized Composite
STYRENE........... Styrene
TA-SOLID........... Tantalum Oxide Solid Electrolytic
AL-SOLID........... Aluminium Solid Electrolytic
ELECT................ Aluminum Foil Electrolytic
NP-ELECT.......... Non-polarised Electrolytic
OS-SOLID.......... Aluminium Solid with Organic Semiconductive Electrolytic
POS-SOLID........ Polymerized Organic Semiconductive
DL-ELECT.......... Double Layered Electrolytic
PPS-FILM........... Polyphenylene Sulfide Film
MT-PPS-FILM..... Metalized Polyphenylene Sulfide Film
MT-PEN-FILM..... Metalized Polyethylenenaphthalate Film
CAPACITOR....... Other

RESISTOR CARBON 4.7K J A 1/4W

- 1/4W — Rated Wattage
- A — Performance Symbols:

A: General B: Non flammable Z: Low noise
Other: Temperature coefficient

T: ±10ppm/°C	U: ±25ppm/°C	C: ±50ppm/°C
D: ±100ppm/°C	E: ±200ppm/°C	F: ±250ppm/°C
G: ±350ppm/°C	H: ±1000ppm/°C±10%	W: ±1200ppm/°C±10%
Y: ±1400ppm/°C±10%	J: ±2000ppm/°C±10%	K: ±2400ppm/°C±10%
L: ±2700ppm/°C±10%	M: ±3000ppm/°C±10%	N: ±3300ppm/°C±10%
P: ±3600ppm/°C±10%	Q: ±3900ppm/°C±10%	R: ±4200ppm/°C±10%
S: ±4300ppm/°C±10%	V: ±4500ppm/°C±10%	X: ±8000ppm/°C±10%

- J — Tolerance Symbols:

A: ±0.05% B: ±0.1% C: ±0.25% D: ±0.5%
F: ±1% G: ±2% J: ±5% K: ±10%
M: ±20% P: +5-15% Z: 0 ohm

- 4.7K — Rated value, ohms:

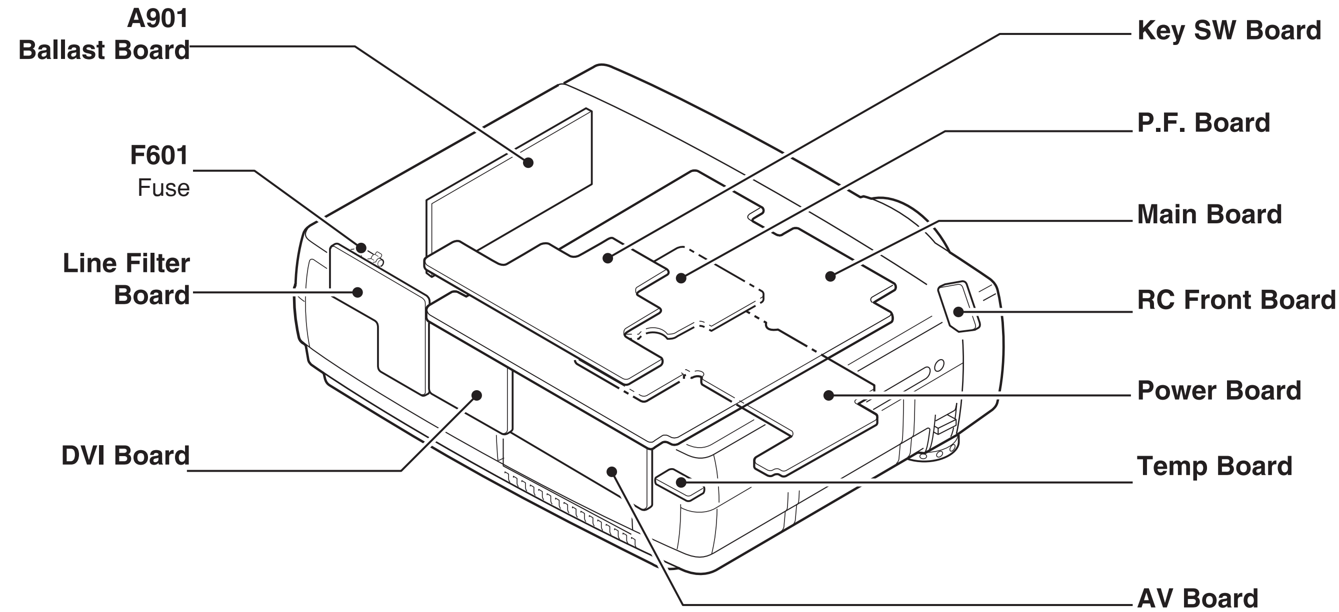
K: 1,000, M: 1,000,000

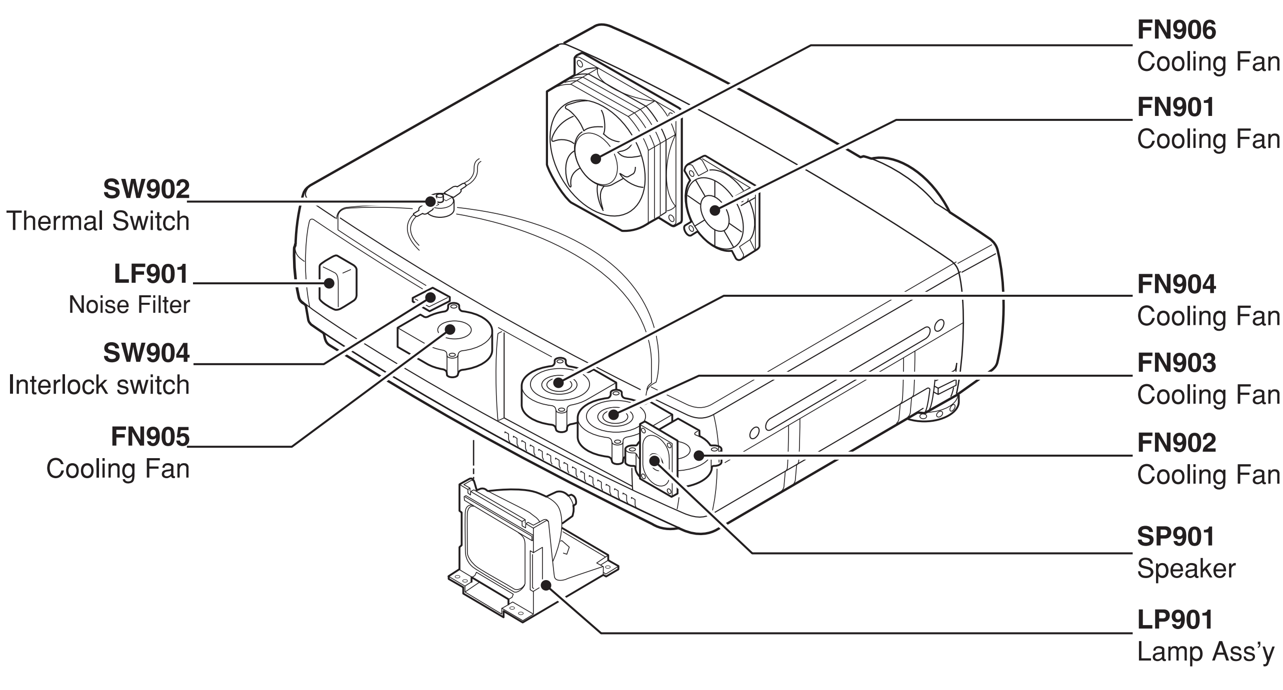
- CARBON — Material:

CARBON........... Carbon
MT-FILM............ Metal Film
OXIDE-MT......... Oxide Metal Film
SOLID................ Composition
MT-GLAZE......... Metal Glaze
WIRE WOUND... Wire Wound
CERAMIC RES.. Ceramic
FUSIBLE RES.... Fusible
RESISTOR .... Other

Note: Parts order must contain Chassis No., Part No., and Descriptions.

● **OUT OF CIRCUIT BOARD**





ASSEMBLIED BOARDS

Key No.	Part No.	Description
⚠	**610 301 3923**	**ASSY,PWB,MAIN MA3A**
⚠	**610 301 3930**	**ASSY,PWB,TEMP MA3A**
⚠	**610 301 3954**	**ASSY,PWB,AV MA3A**
⚠	**610 301 3961**	**ASSY,PWB,DVI MA3A**
⚠	**610 309 4854**	**ASSY,PWB,KEY SW MB3E**
⚠	**610 304 1636**	**ASSY,PWB,P.F. MA3A**
⚠	**610 304 1643**	**ASSY,PWB,LINE FILTER MA3A**
⚠	**610 304 1650**	**ASSY,PWB,R/C MA3A**

OUT OF CIRCUIT BOARDS

Key No.	Part No.	Description
⚠LF901	645 056 9630	UNIT,NOISE FILTER
⚠LP900	610 303 5826	COMPL,OPTICAL LAMP-MA3A
L901	645 044 6207	CORE,FERRITE
L902	645 044 6207	CORE,FERRITE
L903	645 003 3834	CORE,FERRITE
⚠A901	645 055 3691	UNIT,BALLAST
A901A	610 303 9473	CABLE,LAMP
⚠FN901	645 047 6211	MOTOR,FAN DC 1.5W
⚠FN902	645 057 5860	MOTOR,FAN DC 1.8W
⚠FN903	645 057 5877	MOTOR,FAN DC 1.8W
⚠FN904	645 057 5877	MOTOR,FAN DC 1.8W
⚠FN905	645 057 5891	MOTOR,FAN DC 1.8W
⚠FN906	645 052 0754	MOTOR,FAN DC 3.0W
SP901	645 030 6150	SPEAKER,8
⚠SW902	645 026 5457	SWITCH,THERMAL
	645 048 3158	SWITCH,THERMAL
⚠SW904	645 024 8986	SWITCH,PUSH 2P-2TX2
WK8E-48E	645 048 2410	CORD,ID CONNECTOR
WK8G-28D	645 053 2566	CORD,ID CONNECTOR
W651A	610 012 5926	TERMINAL
W651B	610 012 5926	TERMINAL

MAIN BOARD

610 301 3923 ASSY,PWB,MAIN MA3A

TRANSISTOR

Key No.	Part No.	Description
Q2601	405 002 8304	TR 2SA1203-Y-TE12L
Q2602	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q2701	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q2811	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q2821	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q2831	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q2841	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q301	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q331	405 045 8705	TR 2SK536-TB
Q351	405 045 8705	TR 2SK536-TB
Q352	405 045 8705	TR 2SK536-TB
Q3841	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5201	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5301	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5302	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S

Key No.	Part No.	Description
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5311	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5312	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5321	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5331	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5332	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5371	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5376	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5381	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5386	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q5391	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q5398	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q6201	405 079 1505	TR 2SC4269-4-TB
Q6221	405 079 1505	TR 2SC4269-4-TB
Q6241	405 079 1505	TR 2SC4269-4-TB
Q722	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q7601	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q8101	405 045 8705	TR 2SK536-TB
Q8102	405 045 8705	TR 2SK536-TB
Q8141	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S

INTEGRATED CIRCUIT

Key No.	Part No.	Description
IC1201	409 470 2604	IC AD8183ARU
IC1301	409 428 7101	IC AV9155C
IC1302	409 487 5704	IC TC7SZ125FU
IC1303	409 501 9107	IC ICS512MT

Key No.	Part No.	Description
IC1304	409 350 2908	IC TC7W126FU-(TE12L)
IC1351	410 315 5506	IC HD74HCT244TV
	410 356 7507	IC SN74HCT244PWR
IC1361	409 544 4008	IC TC7WBL126FK
IC1481	410 470 6103	IC 24LC256T-I/SN
IC1501	409 528 2402	IC CXA7000R
IC1531	409 528 2402	IC CXA7000R
IC1561	409 528 2402	IC CXA7000R
IC1801	409 330 2508	IC TC7SH04FU-(TE85L)
	410 356 7606	IC SN74AHC1G04HDCKR
IC1802	409 324 4204	IC TC7W00FU-TE12L
IC1803	410 346 8804	IC TC74LCX574FT
IC1804	410 346 8804	IC TC74LCX574FT
IC1805	410 346 8804	IC TC74LCX574FT
IC1806	410 346 8804	IC TC74LCX574FT
IC1812	409 324 4204	IC TC7W00FU-TE12L
IC1813	410 346 8804	IC TC74LCX574FT
IC1822	410 362 6501	IC TC74LCX541FT
IC1823	410 362 6501	IC TC74LCX541FT
IC1825	410 381 4403	IC TC7W32FU(TE12L)
IC1826	409 330 2508	IC TC7SH04FU-(TE85L)
	410 356 7606	IC SN74AHC1G04HDCKR
IC2101	409 252 3102	IC NJM2284M-TE2
IC301	409 528 9005	IC PW164B-10TK
IC3101	410 401 4604	IC VPC3230D-QA-B3
IC311	409 480 1307	IC PST573IM
IC312	409 350 2908	IC TC7W126FU-(TE12L)
IC341	410 337 0503	IC TC74LCX14FT
	410 337 0602	IC HD74LVC14T
IC3501	409 343 0201	IC LT1206CS8
IC351	409 533 6006	IC 24LC32AT-I/SN
IC3531	409 343 0201	IC LT1206CS8
IC3561	409 506 0406	IC M62392FP
IC3801	410 466 3109	IC TWM7000-170010
IC3841	410 315 5506	IC HD74HCT244TV
	410 356 7507	IC SN74HCT244PWR
IC3851	410 457 0100	IC TWM7000-210010
IC3871	409 466 6906	IC SP232ECT
IC401	409 528 3409	IC CXD3526GG
IC402	409 544 6804	IC BD4826G
IC411	410 348 7409	IC TC74LCX125FT(EL)
IC421	410 348 7409	IC TC74LCX125FT(EL)
IC431	410 315 5506	IC HD74HCT244TV
	410 356 7507	IC SN74HCT244PWR
IC441	410 315 5506	IC HD74HCT244TV
	410 356 7507	IC SN74HCT244PWR
IC501	409 528 2402	IC CXA7000R
IC5201	409 530 7204	IC AN5870SB
IC5281	409 493 2902	IC SI-3012LU-TL
IC531	409 528 2402	IC CXA7000R
IC5311	409 434 8109	IC TC4053BFT-(EL)
IC5321	409 526 5306	IC BD7600FV
IC5331	409 438 5500	IC TC4052BFT
IC5341	409 484 2003	IC BA7078AF-E2
IC5351	409 431 6009	IC MC74VHC14DT
	410 356 8009	IC SN74LV14APWR
IC5361	409 441 8406	IC LA7217M-T-TRM
IC561	409 528 2402	IC CXA7000R
IC5641	409 499 1701	IC PQ025EZ01ZP
IC5646	409 499 1701	IC PQ025EZ01ZP
IC5651	409 539 8905	IC PQ033EZ01ZP
IC5661	409 539 8905	IC PQ033EZ01ZP
IC5671	409 416 6505	IC BA05FP-E2
IC5681	409 539 8905	IC PQ033EZ01ZP
IC6201	409 461 7304	IC AD8057ART
IC6221	409 461 7304	IC AD8057ART
IC6241	409 461 7304	IC AD8057ART
IC6301	410 325 4605	IC TC74LCX244FT
IC6351	410 386 1902	IC TC74VCX125FT
IC711	409 347 5400	IC M51204FP-600C
IC7201	409 528 6608	IC LC749400W
IC721	409 400 9208	IC TC7SET32FU-(TE85L)
IC7251	409 462 2308	IC TC7SZ04FU-TE852
IC7256	409 320 9401	IC TC7S66FU(TE85L)
IC7281	409 400 7105	IC TC7W53FU-(TE12L)
IC731	410 378 7103	IC PIC12C508A-04/SM A
IC7801	409 458 3401	IC M62393FP
IC8001	409 544 4107	IC THC63DV161
IC8002	409 397 3005	IC TC7SET04FU-(TE85L)
IC801	410 482 4906	IC MBM29LV800TA90C147A
IC8051	410 321 8300	IC TC74VCX16244FT
IC8061	410 321 8300	IC TC74VCX16244FT
IC8071	410 321 8300	IC TC74VCX16244FT
IC8081	410 407 4004	IC TC74VCX541FT
IC8101	409 434 8109	IC TC4053BFT-(EL)
IC811	410 352 8508	IC IDT71V016S15PHTR
	410 397 0406	IC IC61LV6416-15T
IC8111	409 417 5507	IC 24LC04BT/SN
IC8201	410 353 1805	IC AD9884AKS-140
IC8801	409 481 8602	IC LM76CHMX-5

CAPACITOR

Key No.	Part No.	Description
C1202	403 164 0204	CERAMIC 0.1U Z 25V
C1203	403 164 0204	CERAMIC 0.1U Z 25V
C1204	403 164 0204	CERAMIC 0.1U Z 25V
C1206	403 164 0204	CERAMIC 0.1U Z 25V
C1207	403 164 0204	CERAMIC 0.1U Z 25V
C1209	403 149 9208	CERAMIC 0.01U Z 50V
C1301	403 164 0204	CERAMIC 0.1U Z 25V
C1302	403 280 0508	ELECT 470U M 4V
C1303	403 164 0204	CERAMIC 0.1U Z 25V
C1304	403 139 7504	CERAMIC 39P J 50V
C1305	403 139 7504	CERAMIC 39P J 50V
C1306	403 149 9208	CERAMIC 0.01U Z 50V
C1307	403 164 0204	CERAMIC 0.1U Z 25V
C1309	403 155 1609	CERAMIC 33P J 50V
C1311	403 164 0204	CERAMIC 0.1U Z 25V
C1331	403 149 9208	CERAMIC 0.01U Z 50V
C1332	403 283 6309	CERAMIC 1U Z 10V
C1333	403 164 0204	CERAMIC 0.1U Z 25V
C1351	403 164 0204	CERAMIC 0.1U Z 25V
C1361	403 283 6309	CERAMIC 1U Z 10V
C1480	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C1482	403 164 0204	CERAMIC 0.1U Z 25V
C1483	403 164 0204	CERAMIC 0.1U Z 25V
C1501	403 283 6309	CERAMIC 1U Z 10V
C1502	403 283 6309	CERAMIC 1U Z 10V
C1503	403 323 1301	CERAMIC 0.47U Z 10V
C1504	403 323 1301	CERAMIC 0.47U Z 10V
C1505	403 164 0204	CERAMIC 0.1U Z 25V
C1506	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C1513	403 164 0204	CERAMIC 0.1U Z 25V
C1515	403 283 6309	CERAMIC 1U Z 10V
C1517	403 372 7507	CERAMIC 2.2U K 6.3V
C1518	403 164 0204	CERAMIC 0.1U Z 25V
C1531	403 283 6309	CERAMIC 1U Z 10V
C1532	403 283 6309	CERAMIC 1U Z 10V
C1533	403 323 1301	CERAMIC 0.47U Z 10V
C1534	403 323 1301	CERAMIC 0.47U Z 10V
C1535	403 164 0204	CERAMIC 0.1U Z 25V
C1536	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C1543	403 164 0204	CERAMIC 0.1U Z 25V

Key No.	Part No.	Description
C1545	403 283 6309	CERAMIC 1U Z 10V
C1547	403 372 7507	CERAMIC 2.2U K 6.3V
C1548	403 164 0204	CERAMIC 0.1U Z 25V
C1561	403 283 6309	CERAMIC 1U Z 10V
C1562	403 283 6309	CERAMIC 1U Z 10V
C1563	403 323 1301	CERAMIC 0.47U Z 10V
C1564	403 323 1301	CERAMIC 0.47U Z 10V
C1565	403 164 0204	CERAMIC 0.1U Z 25V
C1566	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C1573	403 164 0204	CERAMIC 0.1U Z 25V
C1575	403 283 6309	CERAMIC 1U Z 10V
C1577	403 372 7507	CERAMIC 2.2U K 6.3V
C1578	403 164 0204	CERAMIC 0.1U Z 25V
C1801	403 283 6309	CERAMIC 1U Z 10V
C1802	403 164 0204	CERAMIC 0.1U Z 25V
C1814	403 164 0204	CERAMIC 0.1U Z 25V
C1824	403 164 0204	CERAMIC 0.1U Z 25V
C2101	403 162 4709	ELECT 10U M 16V
	403 335 0309	ELECT 10U M 16V
C2102	403 162 4709	ELECT 10U M 16V
	403 335 0309	ELECT 10U M 16V
C2103	403 162 4709	ELECT 10U M 16V
	403 335 0309	ELECT 10U M 16V
C2104	403 164 0204	CERAMIC 0.1U Z 25V
C2106	403 164 0204	CERAMIC 0.1U Z 25V
C2107	403 164 0204	CERAMIC 0.1U Z 25V
C2505	403 175 3300	ELECT 47U M 16V
C2506	403 164 0204	CERAMIC 0.1U Z 25V
C2507	403 164 0204	CERAMIC 0.1U Z 25V
C2509	403 164 0204	CERAMIC 0.1U Z 25V
C2520	403 175 3300	ELECT 47U M 16V
C2521	403 164 0204	CERAMIC 0.1U Z 25V
C2522	403 164 0204	CERAMIC 0.1U Z 25V
C2524	403 164 0204	CERAMIC 0.1U Z 25V
C2540	403 175 3300	ELECT 47U M 16V
C2541	403 164 0204	CERAMIC 0.1U Z 25V
C2542	403 164 0204	CERAMIC 0.1U Z 25V
C2544	403 164 0204	CERAMIC 0.1U Z 25V
C2546	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C2561	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C2562	403 164 0204	CERAMIC 0.1U Z 25V
C2563	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C2564	403 164 0204	CERAMIC 0.1U Z 25V
C2566	403 323 8805	CERAMIC 2.2U Z 16V
C2601	403 283 6309	CERAMIC 1U Z 10V
C2791	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C2792	403 164 0204	CERAMIC 0.1U Z 25V
C2806	403 164 0204	CERAMIC 0.1U Z 25V
C2807	403 157 2901	CERAMIC 47P J 50V
C302	403 164 0204	CERAMIC 0.1U Z 25V
C303	403 149 9208	CERAMIC 0.01U Z 50V
C304	403 317 4509	ELECT 100U M 6.3V
C305	403 164 0204	CERAMIC 0.1U Z 25V
C306	403 149 9208	CERAMIC 0.01U Z 50V
C3101	403 164 0204	CERAMIC 0.1U Z 25V
C3102	403 164 0204	CERAMIC 0.1U Z 25V
C3103	403 164 0204	CERAMIC 0.1U Z 25V
C3104	403 325 6304	CERAMIC 0.22U K 10V
C3106	403 157 3601	CERAMIC 100P J 50V
C3107	403 325 6304	CERAMIC 0.22U K 10V
C3108	403 157 3601	CERAMIC 100P J 50V
C3109	403 325 6304	CERAMIC 0.22U K 10V
C311	403 164 0204	CERAMIC 0.1U Z 25V
C3111	403 157 3601	CERAMIC 100P J 50V
C3112	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C3113	403 164 0204	CERAMIC 0.1U Z 25V
C3114	403 281 5205	CERAMIC 0.22U Z 16V
C3116	403 155 2101	CERAMIC 1500P K 50V
C3117	403 215 0900	CERAMIC 390P J 50V
C3118	403 155 2101	CERAMIC 1500P K 50V
C3119	403 205 2808	CERAMIC 0.047U K 25V
C312	403 149 9208	CERAMIC 0.01U Z 50V
C3121	403 307 7008	CERAMIC 0.068U K 16V
C3122	403 307 7008	CERAMIC 0.068U K 16V
C3123	403 307 7008	CERAMIC 0.068U K 16V
C3124	403 155 2101	CERAMIC 1500P K 50V
C3126	403 205 2808	CERAMIC 0.047U K 25V
C3127	403 164 0204	CERAMIC 0.1U Z 25V
C3128	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C3129	403 157 1508	CERAMIC 3P C 50V
C313	403 164 0204	CERAMIC 0.1U Z 25V
C3131	403 157 1508	CERAMIC 3P C 50V
C3132	403 325 6304	CERAMIC 0.22U K 10V
C3133	403 155 2101	CERAMIC 1500P K 50V
C3134	403 215 0900	CERAMIC 390P J 50V
C3136	403 162 4709	ELECT 10U M 16V
	403 335 0309	ELECT 10U M 16V
C3137	403 205 2808	CERAMIC 0.047U K 25V
C3138	403 325 6304	CERAMIC 0.22U K 10V
C3139	403 155 2101	CERAMIC 1500P K 50V
C314	403 149 9208	CERAMIC 0.01U Z 50V
C3141	403 215 0900	CERAMIC 390P J 50V
C3142	403 378 6405	CERAMIC 10U Z 16V
C3143	403 205 2808	CERAMIC 0.047U K 25V
C3144	403 325 6304	CERAMIC 0.22U K 10V
C3146	403 215 0900	CERAMIC 390P J 50V
C3147	403 325 6304	CERAMIC 0.22U K 10V
C3148	403 155 1302	CERAMIC 150P J 50V
C3151	403 325 6304	CERAMIC 0.22U K 10V
C3152	403 325 6304	CERAMIC 0.22U K 10V
C316	403 149 9208	CERAMIC 0.01U Z 50V
C317	403 164 0204	CERAMIC 0.1U Z 25V
C318	403 149 9208	CERAMIC 0.01U Z 50V
C319	403 164 0204	CERAMIC 0.1U Z 25V
C331	403 164 0204	CERAMIC 0.1U Z 25V
C332	403 283 6309	CERAMIC 1U Z 10V
C333	403 164 0204	CERAMIC 0.1U Z 25V
C334	403 149 9208	CERAMIC 0.01U Z 50V
C335	403 149 9208	CERAMIC 0.01U Z 50V
C336	403 164 0204	CERAMIC 0.1U Z 25V
C341	403 164 0204	CERAMIC 0.1U Z 25V
C3501	403 157 3601	CERAMIC 100P J 50V
C3502	403 298 9609	CERAMIC 0.1U K 16V
C3503	403 164 0204	CERAMIC 0.1U Z 25V
C3504	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C351	403 283 6309	CERAMIC 1U Z 10V
C352	403 164 0204	CERAMIC 0.1U Z 25V
C3531	403 157 3601	CERAMIC 100P J 50V
C3532	403 215 2201	CERAMIC 0.01U K 50V
C3533	403 164 0204	CERAMIC 0.1U Z 25V
C3534	403 229 3508	ELECT 100U M 16V
	403 335 0408	ELECT 100U M 16V
C3562	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C3563	403 164 0204	CERAMIC 0.1U Z 25V
C3564	403 164 0204	CERAMIC 0.1U Z 25V

Key No.	Part No.	Description			
C371	403 283 6309	CERAMIC	1U	Z	10V
C372	403 164 0204	CERAMIC	0.1U	Z	25V
C3801	403 164 0204	CERAMIC	0.1U	Z	25V
C3802	403 304 3102	ELECT	22U	M	16V
C3803	403 164 0204	CERAMIC	0.1U	Z	25V
C3804	403 283 6309	CERAMIC	1U	Z	10V
C3831	403 283 6309	CERAMIC	1U	Z	10V
C3851	403 164 0204	CERAMIC	0.1U	Z	25V
C3871	403 207 0307	CERAMIC	1U	Z	16V
C3872	403 207 0307	CERAMIC	1U	Z	16V
C3873	403 207 0307	CERAMIC	1U	Z	16V
C3874	403 207 0307	CERAMIC	1U	Z	16V
C3876	403 283 6309	CERAMIC	1U	Z	10V
C401	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C402	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C403	403 164 0204	CERAMIC	0.1U	Z	25V
C404	403 164 0204	CERAMIC	0.1U	Z	25V
C405	403 164 0204	CERAMIC	0.1U	Z	25V
C406	403 164 0204	CERAMIC	0.1U	Z	25V
C407	403 164 0204	CERAMIC	0.1U	Z	25V
C408	403 164 0204	CERAMIC	0.1U	Z	25V
C409	403 164 0204	CERAMIC	0.1U	Z	25V
C410	403 164 0204	CERAMIC	0.1U	Z	25V
C411	403 164 0204	CERAMIC	0.1U	Z	25V
C412	403 164 0204	CERAMIC	0.1U	Z	25V
C413	403 164 0204	CERAMIC	0.1U	Z	25V
C414	403 164 0204	CERAMIC	0.1U	Z	25V
C415	403 164 0204	CERAMIC	0.1U	Z	25V
C416	403 164 0204	CERAMIC	0.1U	Z	25V
C425	403 283 6309	CERAMIC	1U	Z	10V
C426	403 164 0204	CERAMIC	0.1U	Z	25V
C427	403 164 0204	CERAMIC	0.1U	Z	25V
C428	403 164 0204	CERAMIC	0.1U	Z	25V
C501	403 283 6309	CERAMIC	1U	Z	10V
C502	403 283 6309	CERAMIC	1U	Z	10V
C503	403 323 1301	CERAMIC	0.47U	Z	10V
C504	403 323 1301	CERAMIC	0.47U	Z	10V
C505	403 164 0204	CERAMIC	0.1U	Z	25V
C506	403 229 3508	ELECT	100U	M	16V
	403 335 0408	ELECT	100U	M	16V
C508	403 164 0204	CERAMIC	0.1U	Z	25V
C509	403 149 9208	CERAMIC	0.01U	Z	50V
C511	403 164 0204	CERAMIC	0.1U	Z	25V
C513	403 164 0204	CERAMIC	0.1U	Z	25V
C515	403 283 6309	CERAMIC	1U	Z	10V
C516	403 280 0805	ELECT	330U	M	6.3V
C517	403 372 7507	CERAMIC	2.2U	K	6.3V
C518	403 164 0204	CERAMIC	0.1U	Z	25V
C5201	403 304 2105	ELECT	47U	M	6.3V
C5202	403 283 6309	CERAMIC	1U	Z	10V
C5204	403 164 0204	CERAMIC	0.1U	Z	25V
C5206	403 355 9900	CERAMIC	2.2U	K	10V
C5207	403 355 9900	CERAMIC	2.2U	K	10V
C5208	403 355 9900	CERAMIC	2.2U	K	10V
C5209	403 355 9900	CERAMIC	2.2U	K	10V
C5211	403 164 0204	CERAMIC	0.1U	Z	25V
C5212	403 355 9900	CERAMIC	2.2U	K	10V
C5213	403 355 9900	CERAMIC	2.2U	K	10V
C5216	403 149 9208	CERAMIC	0.01U	Z	50V
C5217	403 280 1604	ELECT	220U	M	16V
C5218	403 149 9208	CERAMIC	0.01U	Z	50V
C5219	403 280 1604	ELECT	220U	M	16V
C5221	403 149 9208	CERAMIC	0.01U	Z	50V
C5222	403 280 1604	ELECT	220U	M	16V
C5223	403 149 9208	CERAMIC	0.01U	Z	50V
C5224	403 229 3508	ELECT	100U	M	16V
	403 335 0408	ELECT	100U	M	16V
C5226	403 164 0204	CERAMIC	0.1U	Z	25V
C5281	403 323 8805	CERAMIC	2.2U	Z	16V
C5301	403 283 6309	CERAMIC	1U	Z	10V
C531	403 283 6309	CERAMIC	1U	Z	10V
C5311	403 164 0204	CERAMIC	0.1U	Z	25V
C5312	403 164 0204	CERAMIC	0.1U	Z	25V
C5314	403 169 2807	CERAMIC	330P	J	50V
C532	403 283 6309	CERAMIC	1U	Z	10V
C5321	403 304 2105	ELECT	47U	M	6.3V
C5322	403 162 6604	ELECT	2.2U	M	50V
C5323	403 355 9900	CERAMIC	2.2U	K	10V
C5324	403 314 5905	CERAMIC	0.47U	K	16V
C5326	403 164 0204	CERAMIC	0.1U	Z	25V
C5327	403 149 9208	CERAMIC	0.01U	Z	50V
C533	403 323 1301	CERAMIC	0.47U	Z	10V
C5331	403 164 0204	CERAMIC	0.1U	Z	25V
C534	403 323 1301	CERAMIC	0.47U	Z	10V
C5340	403 164 0204	CERAMIC	0.1U	Z	25V
C5341	403 205 7803	TA-SOLID	2.2U	M	16V
C5342	403 325 6304	CERAMIC	0.22U	K	10V
C5343	403 364 5801	CERAMIC	1U	K	10V
C5344	403 314 5905	CERAMIC	0.47U	K	16V
C5345	403 355 9900	CERAMIC	2.2U	K	10V
C5346	403 364 5801	CERAMIC	1U	K	10V
C5347	403 164 0204	CERAMIC	0.1U	Z	25V
C5348	403 304 2105	ELECT	47U	M	6.3V
C5349	403 157 3601	CERAMIC	100P	J	50V
C535	403 164 0204	CERAMIC	0.1U	Z	25V
C5351	403 164 0204	CERAMIC	0.1U	Z	25V
C5352	403 155 1609	CERAMIC	33P	J	50V
C5353	403 157 3809	CERAMIC	120P	J	50V
C536	403 229 3508	ELECT	100U	M	16V
	403 335 0408	ELECT	100U	M	16V
C5361	403 364 5801	CERAMIC	1U	K	10V
C5362	403 237 8700	CERAMIC	0.056U	Z	50V
C5363	403 224 6603	CERAMIC	0.022U	Z	50V
C5364	403 157 6909	CERAMIC	820P	K	50V
C5366	403 364 5801	CERAMIC	1U	K	10V
C5367	403 215 2201	CERAMIC	0.01U	K	50V
C5368	403 164 0204	CERAMIC	0.1U	Z	25V
C538	403 164 0204	CERAMIC	0.1U	Z	25V
C5386	403 157 2901	CERAMIC	47P	J	50V
C539	403 149 9208	CERAMIC	0.01U	Z	50V
C5397	403 162 5300	ELECT	4.7U	M	25V
C5398	403 149 9208	CERAMIC	0.01U	Z	50V
C541	403 164 0204	CERAMIC	0.1U	Z	25V
C543	403 164 0204	CERAMIC	0.1U	Z	25V
C545	403 283 6309	CERAMIC	1U	Z	10V
C546	403 280 0805	ELECT	330U	M	6.3V
C547	403 372 7507	CERAMIC	2.2U	K	6.3V
C548	403 164 0204	CERAMIC	0.1U	Z	25V
C550	403 283 6309	CERAMIC	1U	Z	10V
C551	403 164 0204	CERAMIC	0.1U	Z	25V
C561	403 283 6309	CERAMIC	1U	Z	10V
C562	403 283 6309	CERAMIC	1U	Z	10V
C563	403 323 1301	CERAMIC	0.47U	Z	10V
C564	403 323 1301	CERAMIC	0.47U	Z	10V
C5641	403 280 0805	ELECT	330U	M	6.3V
C5642	403 164 0204	CERAMIC	0.1U	Z	25V
C5643	403 164 0204	CERAMIC	0.1U	Z	25V
C5644	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C5646	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C5647	403 164 0204	CERAMIC	0.1U	Z	25V

Key No.	Part No.	Description			
C5648	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C5649	403 164 0204	CERAMIC	0.1U	Z	25V
C565	403 164 0204	CERAMIC	0.1U	Z	25V
C5651	403 164 0204	CERAMIC	0.1U	Z	25V
C5652	403 280 0805	ELECT	330U	M	6.3V
C5653	403 280 0508	ELECT	470U	M	4V
C5654	403 164 0204	CERAMIC	0.1U	Z	25V
C566	403 229 3508	ELECT	100U	M	16V
	403 335 0408	ELECT	100U	M	16V
C5661	403 164 0204	CERAMIC	0.1U	Z	25V
C5662	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C5663	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C5664	403 164 0204	CERAMIC	0.1U	Z	25V
C5671	403 164 0204	CERAMIC	0.1U	Z	25V
C5672	403 280 0805	ELECT	330U	M	6.3V
C5673	403 280 0805	ELECT	330U	M	6.3V
C5674	403 164 0204	CERAMIC	0.1U	Z	25V
C568	403 164 0204	CERAMIC	0.1U	Z	25V
C5681	403 164 0204	CERAMIC	0.1U	Z	25V
C5682	403 280 0805	ELECT	330U	M	6.3V
C5683	403 280 0508	ELECT	470U	M	4V
C5684	403 164 0204	CERAMIC	0.1U	Z	25V
C569	403 149 9208	CERAMIC	0.01U	Z	50V
C571	403 164 0204	CERAMIC	0.1U	Z	25V
C573	403 164 0204	CERAMIC	0.1U	Z	25V
C575	403 283 6309	CERAMIC	1U	Z	10V
C576	403 280 0805	ELECT	330U	M	6.3V
C577	403 372 7507	CERAMIC	2.2U	K	6.3V
C578	403 164 0204	CERAMIC	0.1U	Z	25V
C580	403 283 6309	CERAMIC	1U	Z	10V
C581	403 164 0204	CERAMIC	0.1U	Z	25V
C6201	403 283 6309	CERAMIC	1U	Z	10V
C6203	403 157 1904	CERAMIC	10P	D	50V
C6204	401 105 7909	MT-GLAZE	0.000	ZA	1/16W
C6207	403 157 3304	CERAMIC	68P	J	50V
C6221	403 283 6309	CERAMIC	1U	Z	10V
C6223	403 157 1904	CERAMIC	10P	D	50V
C6224	401 105 7909	MT-GLAZE	0.000	ZA	1/16W
C6227	403 157 3304	CERAMIC	68P	J	50V
C6241	403 283 6309	CERAMIC	1U	Z	10V
C6243	403 157 1904	CERAMIC	10P	D	50V
C6244	401 105 7909	MT-GLAZE	0.000	ZA	1/16W
C6247	403 157 3304	CERAMIC	68P	J	50V
C6261	403 164 0204	CERAMIC	0.1U	Z	25V
C6262	403 280 0805	ELECT	330U	M	6.3V
C6263	403 280 0805	ELECT	330U	M	6.3V
C6264	403 164 0204	CERAMIC	0.1U	Z	25V
C6301	403 164 0204	CERAMIC	0.1U	Z	25V
C6351	403 164 0204	CERAMIC	0.1U	Z	25V
C6601	403 164 0204	CERAMIC	0.1U	Z	25V
C6602	403 164 0204	CERAMIC	0.1U	Z	25V
C6603	403 164 0204	CERAMIC	0.1U	Z	25V
C6604	403 164 0204	CERAMIC	0.1U	Z	25V
C711	403 283 6309	CERAMIC	1U	Z	10V
C712	403 283 6309	CERAMIC	1U	Z	10V
C713	403 283 6309	CERAMIC	1U	Z	10V
C7201	403 164 0204	CERAMIC	0.1U	Z	25V
C7202	403 283 6309	CERAMIC	1U	Z	10V
C7203	403 164 0204	CERAMIC	0.1U	Z	25V
C7204	403 164 0204	CERAMIC	0.1U	Z	25V
C7206	403 164 0204	CERAMIC	0.1U	Z	25V
C7207	403 164 0204	CERAMIC	0.1U	Z	25V
C7208	403 164 0204	CERAMIC	0.1U	Z	25V
C7209	403 164 0204	CERAMIC	0.1U	Z	25V
C7211	403 164 0204	CERAMIC	0.1U	Z	25V
C7212	403 283 6309	CERAMIC	1U	Z	10V
C7213	403 164 0204	CERAMIC	0.1U	Z	25V
C7214	403 164 0204	CERAMIC	0.1U	Z	25V
C7216	403 164 0204	CERAMIC	0.1U	Z	25V
C7217	403 164 0204	CERAMIC	0.1U	Z	25V
C7252	403 283 6309	CERAMIC	1U	Z	10V
C7253	403 164 0204	CERAMIC	0.1U	Z	25V
C7264	403 155 4204	CERAMIC	15P	J	50V
C7281	403 164 0204	CERAMIC	0.1U	Z	25V
C731	403 139 7108	CERAMIC	12P	J	50V
C732	403 139 7108	CERAMIC	12P	J	50V
C733	403 283 6309	CERAMIC	1U	Z	10V
C7601	403 280 0805	ELECT	330U	M	6.3V
C7602	403 280 0805	ELECT	330U	M	6.3V
C7603	403 149 9208	CERAMIC	0.01U	Z	50V
C7801	403 164 0204	CERAMIC	0.1U	Z	25V
C7802	403 283 6309	CERAMIC	1U	Z	10V
C7803	403 283 6309	CERAMIC	1U	Z	10V
C8001	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C8002	403 164 0204	CERAMIC	0.1U	Z	25V
C8004	403 164 0204	CERAMIC	0.1U	Z	25V
C8005	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C8006	403 164 0204	CERAMIC	0.1U	Z	25V
C8011	403 164 0204	CERAMIC	0.1U	Z	25V
C8012	403 155 1500	CERAMIC	180P	J	50V
C8013	403 169 2807	CERAMIC	330P	J	50V
C8014	403 169 2807	CERAMIC	330P	J	50V
C8016	403 155 1500	CERAMIC	180P	J	50V
C8017	403 169 2807	CERAMIC	330P	J	50V
C8018	403 164 0204	CERAMIC	0.1U	Z	25V
C8019	403 169 2807	CERAMIC	330P	J	50V
C8021	403 155 1500	CERAMIC	180P	J	50V
C8022	403 169 2807	CERAMIC	330P	J	50V
C8023	403 157 3601	CERAMIC	100P	J	50V
C8024	403 157 3601	CERAMIC	100P	J	50V
C8026	403 157 3601	CERAMIC	100P	J	50V
C8027	403 157 3601	CERAMIC	100P	J	50V
C8028	403 157 3601	CERAMIC	100P	J	50V
C8029	403 164 0204	CERAMIC	0.1U	Z	25V
C8031	403 283 6309	CERAMIC	1U	Z	10V
C8051	403 304 1801	ELECT	100U	M	6.3V
	403 373 7704	ELECT	100U	M	6.3V
C8052	403 164 0204	CERAMIC	0.1U	Z	25V
C8053	403 164 0204	CERAMIC	0.1U	Z	25V
C806	403 164 0204	CERAMIC	0.1U	Z	25V
C8062	403 164 0204	CERAMIC	0.1U	Z	25V
C8063	403 164 0204	CERAMIC	0.1U	Z	25V
C807	403 283 6309	CERAMIC	1U	Z	10V
C8072	403 164 0204	CERAMIC	0.1U	Z	25V
C8073	403 164 0204	CERAMIC	0.1U	Z	25V
C8082	403 164 0204	CERAMIC	0.1U	Z	25V
C8101	403 304 2105	ELECT	47U	M	6.3V
C8102	403 164 0204	CERAMIC	0.1U	Z	25V
C811	403 164 0204	CERAMIC	0.1U	Z	25V
C812	403 283 6309	CERAMIC	1U	Z	10V
C8202	403 164 0204	CERAMIC	0.1U	Z	25V
C8203	403 164 0204	CERAMIC	0.1U	Z	25V
C8204	403 280 0508	ELECT	470U	M	4V
C8206	403 164 0204	CERAMIC	0.1U	Z	25V
C8207	403 157 3809	CERAMIC	120P	J	50V
C8208	403 215 2201	CERAMIC	0.01U	K	50V
C8211	403 298 9609	CERAMIC	0.1U	K	16V
C8212	403 164 0204	CERAMIC	0.1U	Z	25V
C8213	403 164 0204	CERAMIC	0.1U	Z	25V

Key No.	Part No.	Description
C8214	403 164 0204	CERAMIC 0.1U Z 25V
C8216	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C8217	403 164 0204	CERAMIC 0.1U Z 25V
C8218	403 164 0204	CERAMIC 0.1U Z 25V
C8219	403 164 0204	CERAMIC 0.1U Z 25V
C8801	403 155 1609	CERAMIC 33P J 50V
C8802	403 155 1609	CERAMIC 33P J 50V
C8803	403 164 0204	CERAMIC 0.1U Z 25V
C9791	403 280 0805	ELECT 330U M 6.3V
RESISTOR		
RB1822	645 020 7822	R-NETWORK 10KX4 0.063W
	645 025 5380	R-NETWORK 10KX4 1/16W
RB3101	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB3102	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB3103	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB3104	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB401	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB402	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB403	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB404	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB405	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB406	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB501	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB502	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB503	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB511	645 034 5050	R-NETWORK 22X4 1/32W
	645 037 0823	R-NETWORK 22X4 1/32W
RB512	645 034 5050	R-NETWORK 22X4 1/32W
	645 037 0823	R-NETWORK 22X4 1/32W
RB531	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB532	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB533	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB541	645 034 5050	R-NETWORK 22X4 1/32W
	645 037 0823	R-NETWORK 22X4 1/32W
RB542	645 034 5050	R-NETWORK 22X4 1/32W
	645 037 0823	R-NETWORK 22X4 1/32W
RB561	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB562	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB563	645 036 3528	R-NETWORK 0X4 1/32W
	645 037 0816	R-NETWORK 0X4 1/32W
RB571	645 034 5050	R-NETWORK 22X4 1/32W
	645 037 0823	R-NETWORK 22X4 1/32W
RB572	645 034 5050	R-NETWORK 22X4 1/32W
	645 037 0823	R-NETWORK 22X4 1/32W
RB7281	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7282	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7283	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7284	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7291	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7292	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7293	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7294	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7296	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7297	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7298	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB7299	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8001	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8002	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8003	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8004	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8005	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8006	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8007	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8008	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8011	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8012	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8013	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8014	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8251	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8252	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8253	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8254	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8256	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8257	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8258	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8259	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8261	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8262	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8263	645 036 0985	R-NETWORK 47X4 1/32W
	645 037 0830	R-NETWORK 47X4 1/32W
RB8264	645 036 0985	R-NETWORK 47X4 1/32W

Key No.	Part No.	Description
	645 037 0830	R-NETWORK 47X4 1/32W
R1201	401 105 0504	MT-GLAZE 1K JA 1/16W
R1202	401 105 0504	MT-GLAZE 1K JA 1/16W
R1203	401 105 0504	MT-GLAZE 1K JA 1/16W
R1204	401 105 0405	MT-GLAZE 100 JA 1/16W
R1206	401 105 0405	MT-GLAZE 100 JA 1/16W
R1207	401 105 0405	MT-GLAZE 100 JA 1/16W
R1208	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1211	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1212	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1213	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1301	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1302	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1303	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1305	401 105 0603	MT-GLAZE 10K JA 1/16W
R1306	401 105 0603	MT-GLAZE 10K JA 1/16W
R1309	401 105 0603	MT-GLAZE 10K JA 1/16W
R1312	401 105 0306	MT-GLAZE 10 JA 1/16W
R1313	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1315	401 105 5103	MT-GLAZE 47 JA 1/16W
R1331	401 105 0405	MT-GLAZE 100 JA 1/16W
R1337	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1338	401 105 0603	MT-GLAZE 10K JA 1/16W
R1339	401 105 0306	MT-GLAZE 10 JA 1/16W
R1341	401 105 0603	MT-GLAZE 10K JA 1/16W
R1344	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1345	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1351	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1361	401 105 0504	MT-GLAZE 1K JA 1/16W
R1482	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1484	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1486	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1487	401 105 0306	MT-GLAZE 10 JA 1/16W
R1488	401 105 0306	MT-GLAZE 10 JA 1/16W
R1489	401 105 0405	MT-GLAZE 100 JA 1/16W
R1501	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1502	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1512	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1513	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1514	401 105 0603	MT-GLAZE 10K JA 1/16W
R1515	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1531	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1532	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1542	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1543	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1544	401 105 0603	MT-GLAZE 10K JA 1/16W
R1545	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1561	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1562	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1572	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1573	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1574	401 105 0603	MT-GLAZE 10K JA 1/16W
R1575	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1802	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1804	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1821	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1822	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1828	401 105 0603	MT-GLAZE 10K JA 1/16W
R1833	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1834	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1835	401 105 0603	MT-GLAZE 10K JA 1/16W
R1836	401 105 0603	MT-GLAZE 10K JA 1/16W
R1837	401 105 0603	MT-GLAZE 10K JA 1/16W
R1838	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1839	403 164 0204	CERAMIC 0.1U Z 25V
R1840	403 164 0204	CERAMIC 0.1U Z 25V
R1841	403 164 0204	CERAMIC 0.1U Z 25V
R1843	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1845	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1846	401 105 0603	MT-GLAZE 10K JA 1/16W
R1847	401 105 0603	MT-GLAZE 10K JA 1/16W
R1848	401 105 0603	MT-GLAZE 10K JA 1/16W
R1849	401 105 2904	MT-GLAZE 22K JA 1/16W
R1849A	401 105 2904	MT-GLAZE 22K JA 1/16W
R2101	401 105 5103	MT-GLAZE 47 JA 1/16W
R2102	401 105 8005	MT-GLAZE 1M JA 1/16W
R2103	401 105 8005	MT-GLAZE 1M JA 1/16W
R2104	401 105 0504	MT-GLAZE 1K JA 1/16W
R2506	401 105 0306	MT-GLAZE 10 JA 1/16W
R2507	401 105 0306	MT-GLAZE 10 JA 1/16W
R2508	401 105 0306	MT-GLAZE 10 JA 1/16W
R2509	401 105 0306	MT-GLAZE 10 JA 1/16W
R2510	401 105 0306	MT-GLAZE 10 JA 1/16W
R2511	401 105 0306	MT-GLAZE 10 JA 1/16W
R2512	401 105 0306	MT-GLAZE 10 JA 1/16W
R2513	401 105 0306	MT-GLAZE 10 JA 1/16W
R2514	401 105 0306	MT-GLAZE 10 JA 1/16W
R2515	401 105 0306	MT-GLAZE 10 JA 1/16W
R2516	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2517	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2518	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2519	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2520	401 105 0306	MT-GLAZE 10 JA 1/16W
R2521	401 105 0306	MT-GLAZE 10 JA 1/16W
R2522	401 105 0306	MT-GLAZE 10 JA 1/16W
R2523	401 105 0306	MT-GLAZE 10 JA 1/16W
R2524	401 105 0306	MT-GLAZE 10 JA 1/16W
R2525	401 105 0306	MT-GLAZE 10 JA 1/16W
R2526	401 105 0306	MT-GLAZE 10 JA 1/16W
R2527	401 105 0306	MT-GLAZE 10 JA 1/16W
R2528	401 105 0306	MT-GLAZE 10 JA 1/16W
R2529	401 105 0306	MT-GLAZE 10 JA 1/16W
R2530	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2531	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2532	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2533	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2540	401 105 0306	MT-GLAZE 10 JA 1/16W
R2541	401 105 0306	MT-GLAZE 10 JA 1/16W
R2542	401 105 0306	MT-GLAZE 10 JA 1/16W
R2543	401 105 0306	MT-GLAZE 10 JA 1/16W
R2544	401 105 0306	MT-GLAZE 10 JA 1/16W
R2545	401 105 0306	MT-GLAZE 10 JA 1/16W
R2546	401 105 0306	MT-GLAZE 10 JA 1/16W
R2547	401 105 0306	MT-GLAZE 10 JA 1/16W
R2548	401 105 0306	MT-GLAZE 10 JA 1/16W
R2549	401 105 0306	MT-GLAZE 10 JA 1/16W
R2550	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2551	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2552	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2553	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2561	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
R2562	401 105 3208	MT-GLAZE 270 JA 1/16W
R2563	401 105 3208	MT-GLAZE 270 JA 1/16W
R2564	401 105 3208	MT-GLAZE 270 JA 1/16W
R2601	401 105 0603	MT-GLAZE 10K JA 1/16W
R2602	401 105 6506	MT-GLAZE 680 JA 1/16W
R2603	401 105 4205	MT-GLAZE 33K JA 1/16W
R2606	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2609	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2613	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2621	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2730	401 105 0504	MT-GLAZE 1K JA 1/16W
R2791	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2806	401 105 7909	MT-GLAZE 0.000 ZA 1/16W

Key No.	Part No.	Description		Key No.	Part No.	Description	
R2807	401 105 0405	MT-GLAZE	100 JA 1/16W	R3504	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2812	401 105 0504	MT-GLAZE	1K JA 1/16W	R3506	401 158 4108	MT-GLAZE	4.7 JA 1/16W
R2813	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R3508	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2821	401 105 0504	MT-GLAZE	1K JA 1/16W	R351	401 105 4106	MT-GLAZE	3.3K JA 1/16W
R2822	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R3512	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R2831	401 105 4502	MT-GLAZE	390 JA 1/16W	R352	401 105 4106	MT-GLAZE	3.3K JA 1/16W
R2832	401 105 4502	MT-GLAZE	390 JA 1/16W	R353	401 105 0306	MT-GLAZE	10 JA 1/16W
R2833	401 105 6506	MT-GLAZE	680 JA 1/16W	R3531	401 105 0504	MT-GLAZE	1K JA 1/16W
R2834	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R3532	401 105 5905	MT-GLAZE	560 JA 1/16W
R2841	401 105 0504	MT-GLAZE	1K JA 1/16W	R3533	401 148 6006	MT-GLAZE	2.2 JA 1/16W
R2842	401 105 0504	MT-GLAZE	1K JA 1/16W	R354	401 105 0306	MT-GLAZE	10 JA 1/16W
R2843	401 105 4601	MT-GLAZE	3.9K JA 1/16W	R355	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R2844	401 105 5301	MT-GLAZE	4.7K JA 1/16W	R356	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R301	401 105 4106	MT-GLAZE	3.3K JA 1/16W	R3563	401 105 0504	MT-GLAZE	1K JA 1/16W
R302	401 105 4106	MT-GLAZE	3.3K JA 1/16W	R3564	401 105 0504	MT-GLAZE	1K JA 1/16W
R303	401 105 2904	MT-GLAZE	22K JA 1/16W	R3565	401 105 0603	MT-GLAZE	10K JA 1/16W
R306	401 105 0504	MT-GLAZE	1K JA 1/16W	R3566	401 105 0603	MT-GLAZE	10K JA 1/16W
R307	401 105 0306	MT-GLAZE	10 JA 1/16W	R3567	401 105 0603	MT-GLAZE	10K JA 1/16W
R309	401 105 2805	MT-GLAZE	2.2K JA 1/16W	R3568	401 105 0405	MT-GLAZE	100 JA 1/16W
R3101	401 105 6605	MT-GLAZE	6.8K JA 1/16W	R3569	401 105 0405	MT-GLAZE	100 JA 1/16W
R3102	401 105 0504	MT-GLAZE	1K JA 1/16W	R3571	401 105 1105	MT-GLAZE	12K JA 1/16W
R3103	401 105 6605	MT-GLAZE	6.8K JA 1/16W	R3572	401 105 1105	MT-GLAZE	12K JA 1/16W
R3104	401 113 5904	MT-GLAZE	1.3K JA 1/16W	R3573	401 105 1105	MT-GLAZE	12K JA 1/16W
R3105	401 105 6605	MT-GLAZE	6.8K JA 1/16W	R3574	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3106	401 105 0504	MT-GLAZE	1K JA 1/16W	R3575	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3107	401 105 0405	MT-GLAZE	100 JA 1/16W	R3576	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3108	401 105 0405	MT-GLAZE	100 JA 1/16W	R3581	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3109	401 105 0405	MT-GLAZE	100 JA 1/16W	R3582	401 105 2904	MT-GLAZE	22K JA 1/16W
R3110	401 105 0603	MT-GLAZE	10K JA 1/16W	R3583	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3113	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3584	401 105 2904	MT-GLAZE	22K JA 1/16W
R3114	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3585	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3115	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3586	401 105 2904	MT-GLAZE	22K JA 1/16W
R3116	401 105 5103	MT-GLAZE	47 JA 1/16W	R361	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3117	401 105 5103	MT-GLAZE	47 JA 1/16W	R3611	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3118	401 105 5103	MT-GLAZE	47 JA 1/16W	R3613	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3120	401 105 5103	MT-GLAZE	47 JA 1/16W	R3615	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3121	401 105 5103	MT-GLAZE	47 JA 1/16W	R3617	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R3122	401 105 5103	MT-GLAZE	47 JA 1/16W	R3618	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R3124	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3619	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R3127	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R362	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R314	401 105 4106	MT-GLAZE	3.3K JA 1/16W	R363	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3141	401 105 5202	MT-GLAZE	470 JA 1/16W	R364	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3143	401 105 0306	MT-GLAZE	10 JA 1/16W	R367	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3147	401 105 0306	MT-GLAZE	10 JA 1/16W	R3801	401 105 2904	MT-GLAZE	22K JA 1/16W
R3148	401 105 0306	MT-GLAZE	10 JA 1/16W	R3802	401 105 2904	MT-GLAZE	22K JA 1/16W
R315	401 105 4106	MT-GLAZE	3.3K JA 1/16W	R3803	401 105 2904	MT-GLAZE	22K JA 1/16W
R316	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3804	401 105 2904	MT-GLAZE	22K JA 1/16W
R317	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3806	401 105 0405	MT-GLAZE	100 JA 1/16W
R320	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3807	401 105 0405	MT-GLAZE	100 JA 1/16W
R323	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3808	401 105 0405	MT-GLAZE	100 JA 1/16W
R324	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3809	401 105 0405	MT-GLAZE	100 JA 1/16W
R325	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3810	401 105 3505	MT-GLAZE	270K JA 1/16W
R329	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3811	401 105 0603	MT-GLAZE	10K JA 1/16W
R331	401 105 0306	MT-GLAZE	10 JA 1/16W	R3812	401 105 0603	MT-GLAZE	10K JA 1/16W
R332	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3813	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R333	401 105 0504	MT-GLAZE	1K JA 1/16W	R3814	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R335	401 105 0306	MT-GLAZE	10 JA 1/16W	R3815	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R336	401 105 5905	MT-GLAZE	560 JA 1/16W	R3816	401 105 0306	MT-GLAZE	10 JA 1/16W
R337	401 113 5904	MT-GLAZE	1.3K JA 1/16W	R3817	401 105 0306	MT-GLAZE	10 JA 1/16W
R341	401 105 0306	MT-GLAZE	10 JA 1/16W	R3818	401 105 1501	MT-GLAZE	1.5K JA 1/16W
R343	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3841	401 105 5400	MT-GLAZE	47K JA 1/16W
R346	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3842	401 105 0603	MT-GLAZE	10K JA 1/16W
R347	401 105 0405	MT-GLAZE	100 JA 1/16W	R3843	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R348	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3846	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3501	401 105 7909	MT-GLAZE	0.000 ZA 1/16W	R3847	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3502	401 105 2805	MT-GLAZE	2.2K JA 1/16W	R3851	401 105 0405	MT-GLAZE	100 JA 1/16W
R3503	401 105 0504	MT-GLAZE	1K JA 1/16W	R3852	401 105 0405	MT-GLAZE	100 JA 1/16W

Key No.	Part No.	Description	
R3853	401 105 0405	MT-GLAZE	100 JA 1/16W
R3854	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3855	401 105 2904	MT-GLAZE	22K JA 1/16W
R3856	401 105 2904	MT-GLAZE	22K JA 1/16W
R3857	401 105 2904	MT-GLAZE	22K JA 1/16W
R3858	401 105 0603	MT-GLAZE	10K JA 1/16W
R3859	401 105 0603	MT-GLAZE	10K JA 1/16W
R386	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3861	401 105 0603	MT-GLAZE	10K JA 1/16W
R3862	401 105 0603	MT-GLAZE	10K JA 1/16W
R3866	401 105 0603	MT-GLAZE	10K JA 1/16W
R387	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R3871	401 105 4007	MT-GLAZE	330 JA 1/16W
R3872	401 105 6506	MT-GLAZE	680 JA 1/16W
R3873	401 105 0603	MT-GLAZE	10K JA 1/16W
R3874	401 105 0405	MT-GLAZE	100 JA 1/16W
R3876	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R3877	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R390	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R396	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R401	401 105 0603	MT-GLAZE	10K JA 1/16W
R402	401 105 0603	MT-GLAZE	10K JA 1/16W
R403	401 105 0603	MT-GLAZE	10K JA 1/16W
R404	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R406	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R415	401 105 0306	MT-GLAZE	10 JA 1/16W
R416	401 105 0306	MT-GLAZE	10 JA 1/16W
R417	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R418	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R421	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R422	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R425	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R426	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R427	401 105 0306	MT-GLAZE	10 JA 1/16W
R428	401 105 0306	MT-GLAZE	10 JA 1/16W
R429	401 105 0306	MT-GLAZE	10 JA 1/16W
R431	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R433	401 105 0603	MT-GLAZE	10K JA 1/16W
R435	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R436	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R437	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R438	401 105 0306	MT-GLAZE	10 JA 1/16W
R439	401 105 0306	MT-GLAZE	10 JA 1/16W
R440	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R441	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R450	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R451	401 105 0306	MT-GLAZE	10 JA 1/16W
R452	401 105 0306	MT-GLAZE	10 JA 1/16W
R453	401 105 0306	MT-GLAZE	10 JA 1/16W
R472	401 105 0306	MT-GLAZE	10 JA 1/16W
R473	401 105 0306	MT-GLAZE	10 JA 1/16W
R474	401 105 0306	MT-GLAZE	10 JA 1/16W
R475	401 105 0306	MT-GLAZE	10 JA 1/16W
R476	401 105 0306	MT-GLAZE	10 JA 1/16W
R477	401 105 0306	MT-GLAZE	10 JA 1/16W
R478	401 105 0306	MT-GLAZE	10 JA 1/16W
R479	401 105 0306	MT-GLAZE	10 JA 1/16W
R481	401 105 0306	MT-GLAZE	10 JA 1/16W
R482	401 105 0306	MT-GLAZE	10 JA 1/16W
R483	401 105 0306	MT-GLAZE	10 JA 1/16W
R484	401 105 0306	MT-GLAZE	10 JA 1/16W
R486	401 105 0306	MT-GLAZE	10 JA 1/16W
R487	401 105 0306	MT-GLAZE	10 JA 1/16W
R488	401 105 0306	MT-GLAZE	10 JA 1/16W
R489	401 105 0306	MT-GLAZE	10 JA 1/16W
R491	401 105 0306	MT-GLAZE	10 JA 1/16W
R492	401 105 0306	MT-GLAZE	10 JA 1/16W
R493	401 105 0306	MT-GLAZE	10 JA 1/16W
R494	401 105 0306	MT-GLAZE	10 JA 1/16W
R496	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R497	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R501	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R502	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R505	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R509	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R511	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R512	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R513	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R514	401 105 0603	MT-GLAZE	10K JA 1/16W
R515	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R516	401 105 2607	MT-GLAZE	22 JA 1/16W
R517	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R518	401 105 2607	MT-GLAZE	22 JA 1/16W
R5201	401 105 0405	MT-GLAZE	100 JA 1/16W
R5202	401 105 0405	MT-GLAZE	100 JA 1/16W
R5203	401 105 0405	MT-GLAZE	100 JA 1/16W
R5204	401 105 0504	MT-GLAZE	1K JA 1/16W
R5207	401 105 0504	MT-GLAZE	1K JA 1/16W
R5208	401 105 1303	MT-GLAZE	15 JA 1/16W
R5209	401 105 2805	MT-GLAZE	2.2K JA 1/16W
R5211	403 145 9905	CERAMIC	22P J 50V
R5212	403 145 9905	CERAMIC	22P J 50V
R5213	403 145 9905	CERAMIC	22P J 50V
R5281	401 105 1303	MT-GLAZE	15 JA 1/16W
R5282	401 105 1303	MT-GLAZE	15 JA 1/16W
R5283	401 105 5400	MT-GLAZE	47K JA 1/16W
R5284	401 105 7602	MT-GLAZE	820K JA 1/16W
R5285	401 219 1602	MT-GLAZE	100K FA 1/16W
R5286	401 105 4700	MT-GLAZE	39K JA 1/16W
R5301	401 105 0405	MT-GLAZE	100 JA 1/16W
R5302	401 105 2003	MT-GLAZE	1.8K JA 1/16W
R5303	401 105 0405	MT-GLAZE	100 JA 1/16W
R5304	401 105 2003	MT-GLAZE	1.8K JA 1/16W
R5306	401 105 2003	MT-GLAZE	1.8K JA 1/16W
R5307	401 105 2003	MT-GLAZE	1.8K JA 1/16W
R531	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R5311	401 105 0306	MT-GLAZE	10 JA 1/16W
R5312	401 105 2003	MT-GLAZE	1.8K JA 1/16W
R5313	401 105 0603	MT-GLAZE	10K JA 1/16W
R5314	401 105 2003	MT-GLAZE	1.8K JA 1/16W
R5316	401 105 0504	MT-GLAZE	1K JA 1/16W
R5317	401 105 5202	MT-GLAZE	470 JA 1/16W
R5318	401 105 6506	MT-GLAZE	680 JA 1/16W
R532	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R5321	401 105 8104	MT-GLAZE	56K JA 1/16W
R5322	401 105 8104	MT-GLAZE	56K JA 1/16W
R5323	401 105 5301	MT-GLAZE	4.7K JA 1/16W
R5324	401 105 0702	MT-GLAZE	100K JA 1/16W
R5326	401 105 0504	MT-GLAZE	1K JA 1/16W
R5328	401 105 0504	MT-GLAZE	1K JA 1/16W
R5331	401 105 1402	MT-GLAZE	150 JA 1/16W
R5332	401 105 1402	MT-GLAZE	150 JA 1/16W
R5333	401 105 0603	MT-GLAZE	10K JA 1/16W
R5334	401 105 0603	MT-GLAZE	10K JA 1/16W
R5336	401 105 0603	MT-GLAZE	10K JA 1/16W
R5337	401 105 0603	MT-GLAZE	10K JA 1/16W
R5338	401 105 1402	MT-GLAZE	150 JA 1/16W
R5339	401 105 1402	MT-GLAZE	150 JA 1/16W
R5341	401 105 0405	MT-GLAZE	100 JA 1/16W
R5342	401 105 8005	MT-GLAZE	1M JA 1/16W
R5343	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R5344	401 105 4601	MT-GLAZE	3.9K JA 1/16W
R5346	401 105 7909	MT-GLAZE	0.000 ZA 1/16W
R5349	401 158 4108	MT-GLAZE	4.7 JA 1/16W

Key No.	Part No.	Description
R535	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R5352	401 105 0405	MT-GLAZE 100 JA 1/16W
R5356	401 105 0306	MT-GLAZE 10 JA 1/16W
R5361	401 105 1709	MT-GLAZE 150K JA 1/16W
R5362	401 177 2109	MT-GLAZE 4.7M JA 1/16W
R5363	401 105 7305	MT-GLAZE 820 JA 1/16W
R5364	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R5371	401 105 0504	MT-GLAZE 1K JA 1/16W
R5373	401 105 0504	MT-GLAZE 1K JA 1/16W
R5376	401 105 0504	MT-GLAZE 1K JA 1/16W
R5378	401 105 0504	MT-GLAZE 1K JA 1/16W
R5381	401 105 0504	MT-GLAZE 1K JA 1/16W
R5382	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5383	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R5384	401 105 0603	MT-GLAZE 10K JA 1/16W
R5386	401 105 0504	MT-GLAZE 1K JA 1/16W
R5388	401 105 0504	MT-GLAZE 1K JA 1/16W
R539	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R5391	401 105 0405	MT-GLAZE 100 JA 1/16W
R5393	401 105 0504	MT-GLAZE 1K JA 1/16W
R5394	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R5396	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R5397	401 105 3000	MT-GLAZE 220K JA 1/16W
R541	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R542	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R543	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R544	401 105 0603	MT-GLAZE 10K JA 1/16W
R545	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R546	401 105 2607	MT-GLAZE 22 JA 1/16W
R547	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R548	401 105 2607	MT-GLAZE 22 JA 1/16W
R561	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R562	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R5641	401 241 6200	MT-GLAZE 6.8 JA 1W
R5642	401 105 0405	MT-GLAZE 100 JA 1/16W
R5643	401 241 6200	MT-GLAZE 6.8 JA 1W
R5646	401 234 8105	MT-GLAZE 4.7 JA 1W
R5647	401 234 8105	MT-GLAZE 4.7 JA 1W
R5648	401 105 0405	MT-GLAZE 100 JA 1/16W
R565	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R5651	401 218 8602	MT-GLAZE 5.6 JA 1W
R5652	401 218 8602	MT-GLAZE 5.6 JA 1W
R5653	401 105 0405	MT-GLAZE 100 JA 1/16W
R5661	401 218 8602	MT-GLAZE 5.6 JA 1W
R5662	401 218 8602	MT-GLAZE 5.6 JA 1W
R5663	401 105 0405	MT-GLAZE 100 JA 1/16W
R5681	401 218 8602	MT-GLAZE 5.6 JA 1W
R5682	401 218 8602	MT-GLAZE 5.6 JA 1W
R5683	401 105 0405	MT-GLAZE 100 JA 1/16W
R569	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R571	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R572	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R573	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R574	401 105 0603	MT-GLAZE 10K JA 1/16W
R575	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R576	401 105 2607	MT-GLAZE 22 JA 1/16W
R577	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R578	401 105 2607	MT-GLAZE 22 JA 1/16W
R6201	401 105 0405	MT-GLAZE 100 JA 1/16W
R6202	401 105 1907	MT-GLAZE 180 JA 1/16W
R6203	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R6204	401 105 0405	MT-GLAZE 100 JA 1/16W
R6207	401 105 0405	MT-GLAZE 100 JA 1/16W
R6208	401 105 2706	MT-GLAZE 220 JA 1/16W
R6212	401 105 0504	MT-GLAZE 1K JA 1/16W
R6213	401 105 0504	MT-GLAZE 1K JA 1/16W
R6214	401 105 1303	MT-GLAZE 15 JA 1/16W
R6221	401 105 0405	MT-GLAZE 100 JA 1/16W
R6222	401 105 1907	MT-GLAZE 180 JA 1/16W
R6223	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R6224	401 105 0405	MT-GLAZE 100 JA 1/16W
R6227	401 105 0405	MT-GLAZE 100 JA 1/16W
R6228	401 105 2706	MT-GLAZE 220 JA 1/16W
R6232	401 105 0504	MT-GLAZE 1K JA 1/16W
R6233	401 105 0504	MT-GLAZE 1K JA 1/16W
R6234	401 105 1303	MT-GLAZE 15 JA 1/16W
R6241	401 105 0405	MT-GLAZE 100 JA 1/16W
R6242	401 105 1907	MT-GLAZE 180 JA 1/16W
R6243	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R6244	401 105 0405	MT-GLAZE 100 JA 1/16W
R6247	401 105 0405	MT-GLAZE 100 JA 1/16W
R6248	401 105 2706	MT-GLAZE 220 JA 1/16W
R6252	401 105 0504	MT-GLAZE 1K JA 1/16W
R6253	401 105 0504	MT-GLAZE 1K JA 1/16W
R6254	401 105 1303	MT-GLAZE 15 JA 1/16W
R6301	401 105 0405	MT-GLAZE 100 JA 1/16W
R6302	401 105 0405	MT-GLAZE 100 JA 1/16W
R6303	401 105 0405	MT-GLAZE 100 JA 1/16W
R6304	401 105 0405	MT-GLAZE 100 JA 1/16W
R6306	401 105 0405	MT-GLAZE 100 JA 1/16W
R6307	401 105 0405	MT-GLAZE 100 JA 1/16W
R6308	401 105 0405	MT-GLAZE 100 JA 1/16W
R6309	401 105 0405	MT-GLAZE 100 JA 1/16W
R6351	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6352	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6353	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6356	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6357	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
⚠R6601	402 085 6708	FUSIBLE RES 3.0 JH 1/4W
⚠R6602	645 030 1056	PROTECTOR,IC 3.8A 72V
⚠R6603	402 080 7007	FUSIBLE RES 1.8 JH 1/4W
R6611	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6681	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R711	401 105 1105	MT-GLAZE 12K JA 1/16W
R712	401 105 2508	MT-GLAZE 20K JA 1/16W
R713	401 105 0603	MT-GLAZE 10K JA 1/16W
R714	401 105 0405	MT-GLAZE 100 JA 1/16W
R716	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R717	401 105 0504	MT-GLAZE 1K JA 1/16W
R7201	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7202	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7203	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7204	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7206	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7207	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7208	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7209	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7211	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7212	401 105 3901	MT-GLAZE 33 JA 1/16W
R7213	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7215	401 105 0405	MT-GLAZE 100 JA 1/16W
R7223	401 105 0405	MT-GLAZE 100 JA 1/16W
R7224	401 105 0405	MT-GLAZE 100 JA 1/16W
R7228	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7229	401 105 5103	MT-GLAZE 47 JA 1/16W
R7231	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7233	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7234	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7237	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7238	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R7239	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7252	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7253	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7254	401 105 0702	MT-GLAZE 100K JA 1/16W

Key No.	Part No.	Description
R726	401 105 0504	MT-GLAZE 1K JA 1/16W
R7262	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7263	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7266	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7267	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R727	401 105 0603	MT-GLAZE 10K JA 1/16W
R7273	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7274	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7275	401 105 2607	MT-GLAZE 22 JA 1/16W
R7276	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7277	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7278	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R728	401 105 0504	MT-GLAZE 1K JA 1/16W
R7282	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7284	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7287	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7288	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R731	401 105 0603	MT-GLAZE 10K JA 1/16W
R734	401 105 0603	MT-GLAZE 10K JA 1/16W
R737	401 105 0306	MT-GLAZE 10 JA 1/16W
R739	401 105 2706	MT-GLAZE 220 JA 1/16W
R742	401 105 2706	MT-GLAZE 220 JA 1/16W
R743	401 105 2706	MT-GLAZE 220 JA 1/16W
⚠R7601	402 083 5109	FUSIBLE RES 5.6 JH 1/4W
R7602	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R7603	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R7604	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R7801	401 105 0405	MT-GLAZE 100 JA 1/16W
R7802	401 105 0405	MT-GLAZE 100 JA 1/16W
R7803	401 105 0405	MT-GLAZE 100 JA 1/16W
R7804	401 105 0405	MT-GLAZE 100 JA 1/16W
R7806	401 105 0405	MT-GLAZE 100 JA 1/16W
R7807	401 105 0405	MT-GLAZE 100 JA 1/16W
R7808	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7811	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7813	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R7816	401 105 0405	MT-GLAZE 100 JA 1/16W
R8001	401 105 0603	MT-GLAZE 10K JA 1/16W
R8002	401 105 0603	MT-GLAZE 10K JA 1/16W
R8006	401 105 0603	MT-GLAZE 10K JA 1/16W
R8007	401 105 0603	MT-GLAZE 10K JA 1/16W
R8008	401 105 0603	MT-GLAZE 10K JA 1/16W
R8011	401 105 0603	MT-GLAZE 10K JA 1/16W
R8012	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8013	401 105 0603	MT-GLAZE 10K JA 1/16W
R8018	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R802	401 105 0603	MT-GLAZE 10K JA 1/16W
R8022	401 105 0306	MT-GLAZE 10 JA 1/16W
R8023	401 105 0306	MT-GLAZE 10 JA 1/16W
R8024	401 105 0306	MT-GLAZE 10 JA 1/16W
R8026	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8027	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8028	401 105 4007	MT-GLAZE 330 JA 1/16W
R8029	401 105 3109	MT-GLAZE 27 JA 1/16W
R803	401 105 0603	MT-GLAZE 10K JA 1/16W
R806	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8061	401 105 0306	MT-GLAZE 10 JA 1/16W
R8062	401 105 0306	MT-GLAZE 10 JA 1/16W
R807	401 105 0603	MT-GLAZE 10K JA 1/16W
R808	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8085	401 105 0405	MT-GLAZE 100 JA 1/16W
R8086	401 105 0405	MT-GLAZE 100 JA 1/16W
R8087	401 105 0405	MT-GLAZE 100 JA 1/16W
R8088	401 105 0405	MT-GLAZE 100 JA 1/16W
R8089	401 105 0405	MT-GLAZE 100 JA 1/16W
R8091	401 105 0405	MT-GLAZE 100 JA 1/16W
R8101	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R8102	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R8108	401 105 0603	MT-GLAZE 10K JA 1/16W
R8109	401 105 0603	MT-GLAZE 10K JA 1/16W
R8111	401 105 0405	MT-GLAZE 100 JA 1/16W
R8112	401 105 0405	MT-GLAZE 100 JA 1/16W
R8141	401 105 0603	MT-GLAZE 10K JA 1/16W
R8143	401 105 0603	MT-GLAZE 10K JA 1/16W
R8201	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8202	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8203	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R8206	401 105 0405	MT-GLAZE 100 JA 1/16W
R8207	401 105 0405	MT-GLAZE 100 JA 1/16W
R8209	401 105 0405	MT-GLAZE 100 JA 1/16W
R8211	401 105 0603	MT-GLAZE 10K JA 1/16W
R8212	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R8213	401 105 0405	MT-GLAZE 100 JA 1/16W
R8214	401 105 0405	MT-GLAZE 100 JA 1/16W
R8217	401 105 0603	MT-GLAZE 10K JA 1/16W
R8218	401 105 0306	MT-GLAZE 10 JA 1/16W
R8801	401 105 0306	MT-GLAZE 10 JA 1/16W
R8802	401 105 0306	MT-GLAZE 10 JA 1/16W
R8803	401 105 0603	MT-GLAZE 10K JA 1/16W
R8807	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9791	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9793	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9796	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R9815	401 105 2409	MT-GLAZE 2K JA 1/16W
COIL		
L1301	645 020 1776	INDUCTOR,3.3U M
L1302	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
L1331	645 020 1776	INDUCTOR,3.3U M
L1332	401 035 4108	MT-GLAZE 0.000 ZA 1/8W
L1502	645 002 5129	INDUCTOR,0.47U M
L1532	645 002 5129	INDUCTOR,0.47U M
L1562	645 002 5129	INDUCTOR,0.47U M
L3101	645 026 0988	INDUCTOR,2.2U M
L3501	645 020 1776	INDUCTOR,3.3U M
L3531	645 020 1776	INDUCTOR,3.3U M
L502	645 002 5129	INDUCTOR,0.47U M
L532	645 002 5129	INDUCTOR,0.47U M
L562	645 002 5129	INDUCTOR,0.47U M
L6261	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
L6262	401 158 4108	MT-GLAZE 4.7 JA 1/16W
L6601	645 020 1776	INDUCTOR,3.3U M
L6602	645 020 1776	INDUCTOR,3.3U M
L7201	645 026 0988	INDUCTOR,2.2U M
L7601	645 001 4512	INDUCTOR,10U K
L8001	645 026 0988	INDUCTOR,2.2U M
L8003	645 026 0988	INDUCTOR,2.2U M
L8004	645 026 0988	INDUCTOR,2.2U M
L8051	645 026 0988	INDUCTOR,2.2U M
L8202	645 020 1776	INDUCTOR,3.3U M
L8203	645 026 0988	INDUCTOR,2.2U M
DIODE		
D2561	407 149 0807	DIODE 1SS355-TE-17
D2562	407 149 0807	DIODE 1SS355-TE-17
D2601	407 149 0807	DIODE 1SS355-TE-17
D2701	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2702	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2703	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2704	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2706	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2707	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2708	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2806	407 209 1201	ZD UDZS-TE-176.2B
D2807	407 209 1201	ZD UDZS-TE-176.2B

Key No.	Part No.	Description
D2808	407 210 5601	DIODE RB500V-40-TE-17
D2811	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2821	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2831	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2841	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2861	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2862	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2863	407 221 7106	ZENER DIODE UDZS-TE-1712B
D331	407 149 0807	DIODE 1SS355-TE-17
D3882	407 149 0807	DIODE 1SS355-TE-17
D5281	407 149 0807	DIODE 1SS355-TE-17
D5321	407 149 0807	DIODE 1SS355-TE-17
D5322	407 149 0807	DIODE 1SS355-TE-17
D5323	407 149 0807	DIODE 1SS355-TE-17
D5324	407 149 0807	DIODE 1SS355-TE-17
D5641	407 149 0807	DIODE 1SS355-TE-17
D5646	407 149 0807	DIODE 1SS355-TE-17
D5651	407 149 0807	DIODE 1SS355-TE-17
D5661	407 149 0807	DIODE 1SS355-TE-17
D5671	407 149 0807	DIODE 1SS355-TE-17
D5681	407 149 0807	DIODE 1SS355-TE-17
D6601	407 149 0807	DIODE 1SS355-TE-17
D6602	407 149 0807	DIODE 1SS355-TE-17
D6606	407 149 0807	DIODE 1SS355-TE-17
D7601	407 210 5601	DIODE RB500V-40-TE-17
D7801	407 149 0807	DIODE 1SS355-TE-17
D8101	407 149 0807	DIODE 1SS355-TE-17
D8106	407 201 2701	DIODE RB051L-40-TE25

MISCELLANEOUS

Key No.	Part No.	Description
X1301	645 036 3788	OSC,CRISTAL,16.000MHZ
X1331	645 037 9352	OSC,CRYSTAL 24.000MHZ
X3121	645 034 6118	OSC,CRYSTAL 20.250MHZ
X3801	645 053 9114	OSC,CERAMIC 6.000MHZ
X3851	645 053 3877	OSC,CERAMIC 5.00MHZ
X5361	645 035 8838	OSC,CERAMIC 500.0KHZ
X731	645 025 4468	OSC,CRYSTAL 3.579545MHZ

TEMP BOARD

610 301 3930 ASSY,PWB,TEMP MA3A

INTEGRATED CIRCUIT

Key No.	Part No.	Description
IC4881	409 481 8602	IC LM76CHMX-5

CAPACITOR

Key No.	Part No.	Description		
C4881	403 205 7803	TA-SOLID	2.2U M	16V
C4882	403 164 0204	CERAMIC	0.1U Z	25V
C4883	403 157 3809	CERAMIC	120P J	50V
C4884	403 155 1609	CERAMIC	33P J	50V

RESISTOR

Key No.	Part No.	Description		
R4881	401 105 0306	MT-GLAZE	10 JA	1/16W
R4882	401 105 0306	MT-GLAZE	10 JA	1/16W
R4883	401 105 0603	MT-GLAZE	10K JA	1/16W

AV BOARD

610 301 3954 ASSY,PWB,AV MA3A

TRANSISTOR

Key No.	Part No.	Description
Q011	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q012	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q013	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q014	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q021	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q031	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q041	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q1001	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q1002	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S

Key No.	Part No.	Description
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q1003	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q201	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q202	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q203	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q221	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q222	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q223	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5001	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5111	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5112	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5121	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5131	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5141	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5142	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5151	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5152	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB

Key No.	Part No.	Description
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
INTEGRATED CIRCUIT		
IC001	409 438 5500	IC TC4052BFT
IC201	409 536 5600	IC AD8075ARU
IC221	409 434 8109	IC TC4053BFT-(EL)
IC5001	409 506 5609	IC AN7513
CAPACITOR		
C001	403 323 8805	CERAMIC 2.2U Z 16V
C002	403 323 8805	CERAMIC 2.2U Z 16V
C003	403 323 8805	CERAMIC 2.2U Z 16V
C004	403 323 8805	CERAMIC 2.2U Z 16V
C006	403 323 8805	CERAMIC 2.2U Z 16V
C007	403 164 0204	CERAMIC 0.1U Z 25V
C008	403 323 8805	CERAMIC 2.2U Z 16V
C011	403 175 4802	NP-ELECT 10U M 10V
C012	403 175 4802	NP-ELECT 10U M 10V
C021	403 164 0204	CERAMIC 0.1U Z 25V
C031	403 283 6309	CERAMIC 1U Z 10V
C1004	403 164 0204	CERAMIC 0.1U Z 25V
C1041	403 157 3601	CERAMIC 100P J 50V
C1042	403 157 3601	CERAMIC 100P J 50V
C1061	403 164 0204	CERAMIC 0.1U Z 25V
C200	403 322 7809	ELECT 220U M 6.3V
	403 349 4706	ELECT 220U M 6.3V
C201	403 164 0204	CERAMIC 0.1U Z 25V
C202	403 164 0204	CERAMIC 0.1U Z 25V
C2023	403 164 0204	CERAMIC 0.1U Z 25V
C204	403 283 6309	CERAMIC 1U Z 10V
C207	403 283 6309	CERAMIC 1U Z 10V
C208	403 164 0204	CERAMIC 0.1U Z 25V
C221	403 164 0204	CERAMIC 0.1U Z 25V
C222	403 164 0204	CERAMIC 0.1U Z 25V
C223	403 164 0204	CERAMIC 0.1U Z 25V
C224	403 164 0204	CERAMIC 0.1U Z 25V
C2811	403 304 1801	ELECT 100U M 6.3V
	403 373 7704	ELECT 100U M 6.3V
C2812	403 283 6309	CERAMIC 1U Z 10V
C2813	403 157 6602	CERAMIC 470P K 50V
C5001	403 323 8805	CERAMIC 2.2U Z 16V
C5002	403 207 0307	CERAMIC 1U Z 16V
C5003	403 283 6309	CERAMIC 1U Z 10V
C5004	403 304 2105	ELECT 47U M 6.3V
C5006	403 283 6309	CERAMIC 1U Z 10V
C5101	403 283 6309	CERAMIC 1U Z 10V
C5102	403 283 6309	CERAMIC 1U Z 10V
C5103	403 283 6309	CERAMIC 1U Z 10V
C5104	403 283 6309	CERAMIC 1U Z 10V
C5111	403 139 7306	CERAMIC 18P J 50V
C5141	403 139 7306	CERAMIC 18P J 50V
C5151	403 139 7306	CERAMIC 18P J 50V
RESISTOR		
RC2811	645 034 5029	UNIT,REMOCON RECEIVER
R001	401 105 0306	MT-GLAZE 10 JA 1/16W
R002	401 113 6406	MT-GLAZE 5.1K JA 1/16W
R003	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R004	401 113 6406	MT-GLAZE 5.1K JA 1/16W
R006	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R007	401 105 0702	MT-GLAZE 100K JA 1/16W
R008	401 105 0702	MT-GLAZE 100K JA 1/16W
R009	401 105 0702	MT-GLAZE 100K JA 1/16W
R010	401 105 0702	MT-GLAZE 100K JA 1/16W
R011	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R012	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R013	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R014	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R016	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R017	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R018	401 105 0504	MT-GLAZE 1K JA 1/16W
R019	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R021	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R022	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R023	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R031	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R032	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R033	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R034	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R036	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R041	401 105 0603	MT-GLAZE 10K JA 1/16W
R042	401 105 0603	MT-GLAZE 10K JA 1/16W
R043	401 105 0603	MT-GLAZE 10K JA 1/16W
R1001	401 113 4402	MT-GLAZE 75 JA 1/16W
R1002	401 113 4402	MT-GLAZE 75 JA 1/16W
R1003	401 113 4402	MT-GLAZE 75 JA 1/16W
R1004	401 113 4402	MT-GLAZE 75 JA 1/16W
R1005	401 113 4402	MT-GLAZE 75 JA 1/16W
R1006	401 113 4402	MT-GLAZE 75 JA 1/16W
R1007	401 113 4402	MT-GLAZE 75 JA 1/16W
R1008	401 113 4402	MT-GLAZE 75 JA 1/16W
R1009	401 113 4402	MT-GLAZE 75 JA 1/16W
R1010	401 113 4402	MT-GLAZE 75 JA 1/16W
R1011	401 113 4402	MT-GLAZE 75 JA 1/16W
R1012	401 113 4402	MT-GLAZE 75 JA 1/16W
R1013	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1014	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1015	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1016	401 105 0405	MT-GLAZE 100 JA 1/16W
R1017	401 105 0405	MT-GLAZE 100 JA 1/16W
R1018	401 105 0405	MT-GLAZE 100 JA 1/16W
R1021	401 105 0306	MT-GLAZE 10 JA 1/16W
R1022	401 105 5400	MT-GLAZE 47K JA 1/16W
R1024	401 105 0306	MT-GLAZE 10 JA 1/16W
R1031	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1032	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1041	401 105 5509	MT-GLAZE 470K JA 1/16W
R1042	401 105 5509	MT-GLAZE 470K JA 1/16W
R1043	401 105 0405	MT-GLAZE 100 JA 1/16W
R1044	401 105 0405	MT-GLAZE 100 JA 1/16W
R2001	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2002	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2003	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2004	401 113 4402	MT-GLAZE 75 JA 1/16W
R2005	401 113 4402	MT-GLAZE 75 JA 1/16W
R2006	401 113 4402	MT-GLAZE 75 JA 1/16W
R2007	401 113 4402	MT-GLAZE 75 JA 1/16W
R2008	401 113 4402	MT-GLAZE 75 JA 1/16W
R2009	401 113 4402	MT-GLAZE 75 JA 1/16W
R201	401 105 0405	MT-GLAZE 100 JA 1/16W
R2010	401 113 4402	MT-GLAZE 75 JA 1/16W
R2011	401 113 4402	MT-GLAZE 75 JA 1/16W
R2012	401 113 4402	MT-GLAZE 75 JA 1/16W
R2013	401 113 4402	MT-GLAZE 75 JA 1/16W
R2014	401 113 4402	MT-GLAZE 75 JA 1/16W
R2015	401 113 4402	MT-GLAZE 75 JA 1/16W
R202	401 105 0504	MT-GLAZE 1K JA 1/16W
R2021	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2022	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2023	401 113 4402	MT-GLAZE 75 JA 1/16W
R2024	401 113 4402	MT-GLAZE 75 JA 1/16W
R2025	401 113 4402	MT-GLAZE 75 JA 1/16W

Key No.	Part No.	Description
R2026	401 113 4402	MT-GLAZE 75 JA 1/16W
R2027	401 113 4402	MT-GLAZE 75 JA 1/16W
R2028	401 113 4402	MT-GLAZE 75 JA 1/16W
R2029	401 113 4402	MT-GLAZE 75 JA 1/16W
R203	401 105 0405	MT-GLAZE 100 JA 1/16W
R2030	401 113 4402	MT-GLAZE 75 JA 1/16W
R204	401 105 0504	MT-GLAZE 1K JA 1/16W
R2041	401 105 5509	MT-GLAZE 470K JA 1/16W
R2042	401 105 5509	MT-GLAZE 470K JA 1/16W
R2043	401 105 0405	MT-GLAZE 100 JA 1/16W
R2044	401 105 0405	MT-GLAZE 100 JA 1/16W
R2051	401 105 0702	MT-GLAZE 100K JA 1/16W
R2052	401 105 0702	MT-GLAZE 100K JA 1/16W
R2053	401 105 0405	MT-GLAZE 100 JA 1/16W
R2054	401 105 0405	MT-GLAZE 100 JA 1/16W
R206	401 105 0405	MT-GLAZE 100 JA 1/16W
R207	401 105 0504	MT-GLAZE 1K JA 1/16W
R208	401 113 4402	MT-GLAZE 75 JA 1/16W
R209	401 113 4402	MT-GLAZE 75 JA 1/16W
R211	401 113 4402	MT-GLAZE 75 JA 1/16W
R212	401 105 0405	MT-GLAZE 100 JA 1/16W
R213	401 105 0504	MT-GLAZE 1K JA 1/16W
R214	401 105 0405	MT-GLAZE 100 JA 1/16W
R216	401 105 0504	MT-GLAZE 1K JA 1/16W
R217	401 105 0405	MT-GLAZE 100 JA 1/16W
R218	401 105 0504	MT-GLAZE 1K JA 1/16W
R219	401 105 0504	MT-GLAZE 1K JA 1/16W
R221	401 105 0504	MT-GLAZE 1K JA 1/16W
R222	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R223	401 105 0504	MT-GLAZE 1K JA 1/16W
R225	401 105 0306	MT-GLAZE 10 JA 1/16W
R226	401 105 0504	MT-GLAZE 1K JA 1/16W
R227	401 105 0504	MT-GLAZE 1K JA 1/16W
R228	401 105 0504	MT-GLAZE 1K JA 1/16W
R229	401 105 0306	MT-GLAZE 10 JA 1/16W
R231	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R232	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R233	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2811	401 105 2706	MT-GLAZE 220 JA 1/16W
R2812	401 105 0405	MT-GLAZE 100 JA 1/16W
R5001	401 105 0603	MT-GLAZE 10K JA 1/16W
R5002	401 105 0603	MT-GLAZE 10K JA 1/16W
R5003	401 105 0603	MT-GLAZE 10K JA 1/16W
R5004	401 105 0603	MT-GLAZE 10K JA 1/16W
R5006	401 105 0603	MT-GLAZE 10K JA 1/16W
R5007	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R5008	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R5113	401 105 0504	MT-GLAZE 1K JA 1/16W
R5114	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R5116	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R5117	401 105 5202	MT-GLAZE 470 JA 1/16W
R5123	401 105 1402	MT-GLAZE 150 JA 1/16W
R5124	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R5126	401 105 5103	MT-GLAZE 47 JA 1/16W
R5133	401 105 1402	MT-GLAZE 150 JA 1/16W
R5134	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R5136	401 105 5103	MT-GLAZE 47 JA 1/16W
R5143	401 105 0504	MT-GLAZE 1K JA 1/16W
R5144	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R5147	401 105 5202	MT-GLAZE 470 JA 1/16W
R5153	401 105 0504	MT-GLAZE 1K JA 1/16W
R5154	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R5157	401 105 5202	MT-GLAZE 470 JA 1/16W

COIL

Key No.	Part No.	Description
L1021	645 044 8843	FILTER,EMI 200MHZ
L1022	645 044 8843	FILTER,EMI 200MHZ
L1041	645 045 6183	FILTER,EMI 25MHZ
L1042	645 045 6183	FILTER,EMI 25MHZ
L1051	645 045 6183	FILTER,EMI 25MHZ
L1052	645 045 6183	FILTER,EMI 25MHZ
L1053	645 045 6183	FILTER,EMI 25MHZ
L1054	645 045 6183	FILTER,EMI 25MHZ
L1055	645 045 6183	FILTER,EMI 25MHZ
L1056	645 045 6183	FILTER,EMI 25MHZ
L1057	645 045 6183	FILTER,EMI 25MHZ
L2004	645 044 8836	FILTER,EMI 100MHZ
L2005	645 044 8836	FILTER,EMI 100MHZ
L2006	645 044 8836	FILTER,EMI 100MHZ
L2023	645 044 8836	FILTER,EMI 100MHZ
L2024	645 044 8836	FILTER,EMI 100MHZ
L2041	645 045 6183	FILTER,EMI 25MHZ
L2042	645 045 6183	FILTER,EMI 25MHZ
L2051	645 045 6183	FILTER,EMI 25MHZ
L2052	645 045 6183	FILTER,EMI 25MHZ

DIODE

Key No.	Part No.	Description
D011	407 149 0807	DIODE 1SS355-TE-17
D012	407 149 0807	DIODE 1SS355-TE-17
D1001	407 209 1201	ZD UDZS-TE-176.2B
D1002	407 209 1201	ZD UDZS-TE-176.2B
D1003	407 209 1201	ZD UDZS-TE-176.2B
D1020	407 209 1201	ZD UDZS-TE-176.2B
D1021	407 209 1201	ZD UDZS-TE-176.2B
D1022	407 209 1201	ZD UDZS-TE-176.2B
D1031	407 221 7106	ZENER DIODE UDZS-TE-1712B
D1032	407 221 7106	ZENER DIODE UDZS-TE-1712B
D1041	407 221 7106	ZENER DIODE UDZS-TE-1712B
D1042	407 221 7106	ZENER DIODE UDZS-TE-1712B
D1043	407 221 7106	ZENER DIODE UDZS-TE-1712B
D1044	407 221 7106	ZENER DIODE UDZS-TE-1712B
D1051	645 045 7449	SURGE-ABSORBER
D1053	407 218 7706	ZENER DIODE UDZS20B-TE-17
D1054	407 218 7706	ZENER DIODE UDZS20B-TE-17
D1055	407 218 7706	ZENER DIODE UDZS20B-TE-17
D1056	645 045 7449	SURGE-ABSORBER
D1058	407 218 7706	ZENER DIODE UDZS20B-TE-17
D1059	407 218 7706	ZENER DIODE UDZS20B-TE-17
D1061	407 209 1201	ZD UDZS-TE-176.2B
D1064	407 209 1201	ZD UDZS-TE-176.2B
D1065	645 045 7449	SURGE-ABSORBER
D1066	645 045 7449	SURGE-ABSORBER
D2001	645 045 7449	SURGE-ABSORBER
D2002	645 045 7449	SURGE-ABSORBER
D2003	645 045 7449	SURGE-ABSORBER
D2021	645 045 7449	SURGE-ABSORBER
D2022	645 045 7449	SURGE-ABSORBER
D2025	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2041	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2042	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2043	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2044	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2051	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2052	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2053	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2054	407 221 7106	ZENER DIODE UDZS-TE-1712B
D2811	407 209 1201	ZD UDZS-TE-176.2B
D2812	407 209 1201	ZD UDZS-TE-176.2B

MISCELLANEOUS

Key No.	Part No.	Description
K10A	645 009 8093	SOCKET,D-SUB 15P
K10B	645 000 2571	JACK,PHONE D8.0
K10C	645 000 2595	SOCKET,DIN 8P
K10D	645 028 0382	SOCKET,USB 4P
K20A	645 042 2799	JACK,RCA-3
K20B	645 030 6297	SOCKET,DIN 4P

Key No.	Part No.	Description
K20C	645 047 8499	JACK,RCA-2
K20D	645 047 8499	JACK,RCA-2
SW1061	645 042 8104	SWITCH,PUSH 1P-1TX1

DVI BOARD

610 301 3961 ASSY,PWB,DVI MA3A

TRANSISTOR

Key No.	Part No.	Description
Q3071	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
Q3072	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F

INTEGRATED CIRCUIT

Key No.	Part No.	Description
IC3061	409 536 5501	IC AD8074ARU

CAPACITOR

Key No.	Part No.	Description
C1086	403 164 0204	CERAMIC 0.1U Z 25V
C3061	403 304 2105	ELECT 47U M 6.3V
C3062	403 164 0204	CERAMIC 0.1U Z 25V
C3063	403 304 2105	ELECT 47U M 6.3V
C3064	403 164 0204	CERAMIC 0.1U Z 25V
C3066	403 164 0204	CERAMIC 0.1U Z 25V
C3071	403 164 0204	CERAMIC 0.1U Z 25V
C3072	403 164 0204	CERAMIC 0.1U Z 25V

RESISTOR

Key No.	Part No.	Description
R1091	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1093	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3051	401 113 4402	MT-GLAZE 75 JA 1/16W
R3052	401 113 4402	MT-GLAZE 75 JA 1/16W
R3053	401 113 4402	MT-GLAZE 75 JA 1/16W
R3054	401 113 4402	MT-GLAZE 75 JA 1/16W
R3055	401 113 4402	MT-GLAZE 75 JA 1/16W
R3056	401 113 4402	MT-GLAZE 75 JA 1/16W
R3057	401 113 4402	MT-GLAZE 75 JA 1/16W
R3058	401 113 4402	MT-GLAZE 75 JA 1/16W
R3059	401 113 4402	MT-GLAZE 75 JA 1/16W
R3060	401 113 4402	MT-GLAZE 75 JA 1/16W
R3061	401 113 4402	MT-GLAZE 75 JA 1/16W
R3062	401 113 4402	MT-GLAZE 75 JA 1/16W
R3063	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3064	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3065	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3066	401 105 0405	MT-GLAZE 100 JA 1/16W
R3067	401 105 0405	MT-GLAZE 100 JA 1/16W
R3068	401 105 0405	MT-GLAZE 100 JA 1/16W
R3069	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R3070	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R3071	401 105 0405	MT-GLAZE 100 JA 1/16W
R3072	401 105 5400	MT-GLAZE 47K JA 1/16W
R3073	401 105 0306	MT-GLAZE 10 JA 1/16W
R3074	401 105 0405	MT-GLAZE 100 JA 1/16W
R3075	401 105 5400	MT-GLAZE 47K JA 1/16W
R3076	401 105 0306	MT-GLAZE 10 JA 1/16W
R3077	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R3078	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R3079	401 105 0306	MT-GLAZE 10 JA 1/16W
R3081	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R3082	401 105 3307	MT-GLAZE 2.7K JA 1/16W

COIL

Key No.	Part No.	Description
L3071	645 044 8843	FILTER,EMI 200MHZ
L3072	645 044 8843	FILTER,EMI 200MHZ

DIODE

Key No.	Part No.	Description
D3051	407 209 1201	ZD UDZS-TE-176.2B
D3052	407 209 1201	ZD UDZS-TE-176.2B
D3053	407 209 1201	ZD UDZS-TE-176.2B
D3071	407 221 7106	ZENER DIODE UDZS-TE-1712B
D3072	407 221 7106	ZENER DIODE UDZS-TE-1712B

MISCELLANEOUS

Key No.	Part No.	Description
K10E	645 053 7967	SOCKET,DVI 29P

KEY SW BOARD

610 309 4854 ASSY,PWB,KEY SW MB3E

RESISTOR

Key No.	Part No.	Description
R6840	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6842	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R6844	401 105 2904	MT-GLAZE 22K JA 1/16W
R6846	401 105 2904	MT-GLAZE 22K JA 1/16W
R6848	401 105 2904	MT-GLAZE 22K JA 1/16W
R6849	401 105 2904	MT-GLAZE 22K JA 1/16W

DIODE

Key No.	Part No.	Description
D2861	407 209 7500	LED SML-210YT T86 L
D2862	407 203 7803	LED SML-210LT T86 M
D2863	407 203 7902	LED SML-210MT T86 M
D2864	407 203 7803	LED SML-210LT T86 M
D6801	407 149 0807	DIODE 1SS355-TE-17
D6802	407 149 0807	DIODE 1SS355-TE-17
D6803	407 149 0807	DIODE 1SS355-TE-17

MISCELLANEOUS

Key No.	Part No.	Description
SW6801	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6802	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6803	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6804	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6806	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6807	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6808	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6809	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6871	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6872	645 026 2791	SWITCH,PUSH 1P-1TX1
SW6873	645 026 2791	SWITCH,PUSH 1P-1TX1

POWER BOARD

610 304 1629 ASSY,PWB,POWER MA3A

TRANSISTOR

Key No.	Part No.	Description
Q5501	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q5551	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q65A	405 047 9007	TR 2SB1204-S-TL
	405 047 9106	TR 2SB1204-T-TL
Q65B	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q65C	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q651	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q66A	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q661	405 047 9007	TR 2SB1204-S-TL
	405 047 9106	TR 2SB1204-T-TL
Q662	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q67A	405 139 7706	TR IMZ1A-T108
Q67P	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q671	405 047 9007	TR 2SB1204-S-TL
	405 047 9106	TR 2SB1204-T-TL
Q672	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q68A	405 139 7706	TR IMZ1A-T108
Q68P	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q681	405 047 9007	TR 2SB1204-S-TL
	405 047 9106	TR 2SB1204-T-TL
Q682	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q69A	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q691	405 154 3301	TR 2SK3280-TL

INTEGRATED CIRCUIT

Key No.	Part No.	Description
IC5501	409 362 1104	IC BA6287F
IC5551	409 362 1104	IC BA6287F
IC631	409 421 4701	IC STR-Z2156
IC65A	409 531 6206	IC FA7701V-TE1
IC651	409 344 6509	IC UPC1093T-E1
IC671	409 531 6206	IC FA7701V-TE1
IC681	409 531 6206	IC FA7701V-TE1

CAPACITOR

Key No.	Part No.	Description
C5503	403 149 9208	CERAMIC 0.01U Z 50V
C5553	403 149 9208	CERAMIC 0.01U Z 50V
C630	403 323 8706	MT-POLYEST 0.047U K 450V
C631	403 192 4809	TA-SOLID 2.2U M 35V
C633	403 113 3805	CERAMIC 1000P K 50V
C634	403 247 3306	CERAMIC 330P K 2K
C635	403 167 8603	CERAMIC 220P K 2K
C636	403 070 2606	CERAMIC 0.1U Z 50V
C637	403 157 6800	CERAMIC 680P K 50V
C638	403 208 1402	TA-SOLID 1U M 25V
C639	403 356 1804	ELECT 220U M 35V

Key No.	Part No.	Description		
C640	403 164 0204	CERAMIC	0.1U Z	25V
C641	403 281 5205	CERAMIC	0.22U Z	16V
C642	403 083 4307	POLYPRO	0.022U J	400V
C643	403 256 2406	CERAMIC	0.22U Z	50V
C65B	403 164 0204	CERAMIC	0.1U Z	25V
C65D	403 155 2309	CERAMIC	4700P K	50V
C65E	403 281 5205	CERAMIC	0.22U Z	16V
C65F	403 194 4609	ELECT	470U M	16V
C65G	403 164 0204	CERAMIC	0.1U Z	25V
C651	403 369 2409	ELECT	2700U M	25V
C652	403 350 5303	ELECT	3900U M	10V
C653	403 331 0303	ELECT	470U M	16V
C654	403 164 0204	CERAMIC	0.1U Z	25V
C655	403 164 0204	CERAMIC	0.1U Z	25V
C656	403 345 9606	CERAMIC	0.47U K	10V
C657	403 157 6404	CERAMIC	330P K	50V
C658	403 157 6404	CERAMIC	330P K	50V
C659	403 218 8101	ELECT	1000U M	25V
C661	403 218 8101	ELECT	1000U M	25V
C671	403 281 5205	CERAMIC	0.22U Z	16V
C672	403 164 0204	CERAMIC	0.1U Z	25V
C674	403 155 2309	CERAMIC	4700P K	50V
C676	403 194 4609	ELECT	470U M	16V
C681	403 281 5205	CERAMIC	0.22U Z	16V
C682	403 164 0204	CERAMIC	0.1U Z	25V
C684	403 155 2309	CERAMIC	4700P K	50V
C686	403 194 4609	ELECT	470U M	16V
C69Z	403 164 0204	CERAMIC	0.1U Z	25V
C691	403 206 9004	ELECT	1000U M	6.3V
C692	403 206 9004	ELECT	1000U M	6.3V
C693	403 206 9004	ELECT	1000U M	6.3V
C694	403 206 9004	ELECT	1000U M	6.3V
C695	403 280 0805	ELECT	330U M	6.3V
RESISTOR				
R5501	401 105 0504	MT-GLAZE	1K JA	1/16W
R5502	401 105 0504	MT-GLAZE	1K JA	1/16W
R5503	401 105 5202	MT-GLAZE	470 JA	1/16W
R5504	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R5505	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R5506	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R5551	401 105 0504	MT-GLAZE	1K JA	1/16W
R5552	401 105 0504	MT-GLAZE	1K JA	1/16W
R5553	401 105 5202	MT-GLAZE	470 JA	1/16W
R5554	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R5555	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R5556	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R63B	401 275 2902	MT-GLAZE	68K JA	1W
R63C	401 275 2902	MT-GLAZE	68K JA	1W
R63D	401 275 2902	MT-GLAZE	68K JA	1W
R63E	401 275 2902	MT-GLAZE	68K JA	1W
R632	401 190 1707	MT-GLAZE	0.000 ZA	1W
⚠R633	402 079 7803	FUSIBLE RES	22 JH	1/4W
R634	401 238 4509	MT-GLAZE	47 JA	1/3W
R635	401 105 0504	MT-GLAZE	1K JA	1/16W
R636	401 257 7406	MT-GLAZE	120 JA	1/3W
R637	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R638	401 105 0603	MT-GLAZE	10K JA	1/16W
R643	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R645	401 105 0603	MT-GLAZE	10K JA	1/16W
R65A	401 276 4707	MT-GLAZE	0.000 ZA	1/3W
R65B	401 105 4007	MT-GLAZE	330 JA	1/16W
R65C	401 230 4705	MT-GLAZE	680 JA	1W
R65E	401 113 8400	MT-GLAZE	75K JA	1/16W
R65G	401 105 0702	MT-GLAZE	100K JA	1/16W
R65H	401 105 4700	MT-GLAZE	39K JA	1/16W
R65J	401 105 2904	MT-GLAZE	22K JA	1/16W
R65K	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R65L	401 105 4601	MT-GLAZE	3.9K JA	1/16W
R65P	401 105 0603	MT-GLAZE	10K JA	1/16W
R65Q	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R65V	401 105 0603	MT-GLAZE	10K JA	1/16W
R65W	401 105 0603	MT-GLAZE	10K JA	1/16W
R65X	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R65Y	401 105 8005	MT-GLAZE	1M JA	1/16W
R651	401 105 0504	MT-GLAZE	1K JA	1/16W
R652	401 105 0306	MT-GLAZE	10 JA	1/16W
R653	401 186 0202	MT-GLAZE	10K DA	1/16W
R654	401 185 9305	MT-GLAZE	560 DA	1/16W
R655	401 185 9503	MT-GLAZE	6.8K DA	1/16W
R656	401 105 3208	MT-GLAZE	270 JA	1/16W
R657	401 105 0504	MT-GLAZE	1K JA	1/16W
R658	401 105 0504	MT-GLAZE	1K JA	1/16W
R659	401 105 0504	MT-GLAZE	1K JA	1/16W
R66A	401 105 0603	MT-GLAZE	10K JA	1/16W
R66B	401 105 0603	MT-GLAZE	10K JA	1/16W
R66C	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R660	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R661	401 105 0603	MT-GLAZE	10K JA	1/16W
R662	401 230 8000	MT-GLAZE	1K JA	1/3W
R663	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R664	401 105 0603	MT-GLAZE	10K JA	1/16W
R67A	401 217 3806	MT-GLAZE	27K FA	1/16W
R67B	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R67C	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R67D	401 219 1107	MT-GLAZE	1.8K FA	1/16W
R67E	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R67F	401 105 0603	MT-GLAZE	10K JA	1/16W
R67G	401 105 0504	MT-GLAZE	1K JA	1/16W
R67H	401 105 2904	MT-GLAZE	22K JA	1/16W
R67I	401 105 0504	MT-GLAZE	1K JA	1/16W
R67K	401 105 0603	MT-GLAZE	10K JA	1/16W
R67P	401 105 0504	MT-GLAZE	1K JA	1/16W
R67Q	401 105 0603	MT-GLAZE	10K JA	1/16W
R670	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R671	401 276 4707	MT-GLAZE	0.000 ZA	1/3W
R672	401 105 4007	MT-GLAZE	330 JA	1/16W
R673	401 230 4705	MT-GLAZE	680 JA	1W
R674	401 105 8005	MT-GLAZE	1M JA	1/16W
R675	401 113 8400	MT-GLAZE	75K JA	1/16W
R676	401 105 0702	MT-GLAZE	100K JA	1/16W
R679	401 105 0603	MT-GLAZE	10K JA	1/16W
R68A	401 217 3806	MT-GLAZE	27K FA	1/16W
R68B	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R68C	401 105 7909	MT-GLAZE	0.000 ZA	1/16W
R68D	401 219 1107	MT-GLAZE	1.8K FA	1/16W
R68E	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R68F	401 105 0603	MT-GLAZE	10K JA	1/16W
R68G	401 105 0504	MT-GLAZE	1K JA	1/16W
R68H	401 105 2904	MT-GLAZE	22K JA	1/16W
R68I	401 105 0504	MT-GLAZE	1K JA	1/16W
R68K	401 105 0603	MT-GLAZE	10K JA	1/16W
R68P	401 105 0504	MT-GLAZE	1K JA	1/16W
R68Q	401 105 0603	MT-GLAZE	10K JA	1/16W
R680	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R681	401 276 4707	MT-GLAZE	0.000 ZA	1/3W
R682	401 105 4007	MT-GLAZE	330 JA	1/16W
R683	401 230 4705	MT-GLAZE	680 JA	1W
R684	401 105 8005	MT-GLAZE	1M JA	1/16W
R685	401 113 8400	MT-GLAZE	75K JA	1/16W
R686	401 105 0702	MT-GLAZE	100K JA	1/16W
R689	401 105 0603	MT-GLAZE	10K JA	1/16W
R69A	401 105 0603	MT-GLAZE	10K JA	1/16W
R69B	401 105 0603	MT-GLAZE	10K JA	1/16W
R69C	401 105 0603	MT-GLAZE	10K JA	1/16W

Key No.	Part No.	Description
R69D	401 105 0603	MT-GLAZE 10K JA 1/16W
R69E	401 105 0603	MT-GLAZE 10K JA 1/16W
R69F	401 105 0603	MT-GLAZE 10K JA 1/16W
R69G	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R69H	401 105 0504	MT-GLAZE 1K JA 1/16W
R69R	401 258 7504	MT-GLAZE 12 JA 1/3W
R69Z	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R691	401 105 2904	MT-GLAZE 22K JA 1/16W
R692	401 105 0702	MT-GLAZE 100K JA 1/16W
R695	401 225 4604	MT-GLAZE 1.2 JA 1W
TRANSFORMER		
⚠T651	645 030 7126	TRANS,POWER,PULSE
COIL		
L65A	645 007 7975	INDUCTOR,100U K
L661	645 048 5688	INDUCTOR,47U K
L671	645 048 5381	INDUCTOR,100U K
L681	645 048 5381	INDUCTOR,100U K
L691	645 048 5664	INDUCTOR,390U K
L692	645 007 8118	INDUCTOR,390U K
L693	645 007 7975	INDUCTOR,100U K
L694	645 001 4512	INDUCTOR,10U K
L695	645 020 1776	INDUCTOR,3.3U M
DIODE		
D5501	407 209 4509	ZD UDZS-TE-176.8B
	407 187 7806	ZENER DIODE UDZ6.8B-TE-17
D5551	407 209 4509	ZD UDZS-TE-176.8B
	407 187 7806	ZENER DIODE UDZ6.8B-TE-17
D631	407 190 4106	DIODE SFPL-52V
D633	407 221 7106	ZENER DIODE UDZS-TE-1712B
D636	407 226 7101	DIODE SC311-06
D65A	407 201 2701	DIODE RB051L-40-TE25
D65B	407 149 0807	DIODE 1SS355-TE-17
D651	407 222 9604	DIODE FMB-2306
D651B	411 174 4808	SCR S-TPG PAN+SWW 3X8
D651H	610 293 4281	HEAT SINK D-MS6A
D652	407 222 9703	DIODE FMJ-23L
D652B	411 174 4808	SCR S-TPG PAN+SWW 3X8
D653	407 190 4106	DIODE SFPL-52V
D654	407 209 1201	ZD UDZS-TE-176.2B
D661	407 149 0807	DIODE 1SS355-TE-17
D67P	407 206 6308	ZD UDZS-TE-175.1B
	407 179 1706	ZENER DIODE UDZ5.1B-TE-17
D67Q	407 149 0807	DIODE 1SS355-TE-17
D671	407 201 2701	DIODE RB051L-40-TE25
D68P	407 206 6308	ZD UDZS-TE-175.1B
	407 179 1706	ZENER DIODE UDZ5.1B-TE-17
D68Q	407 149 0807	DIODE 1SS355-TE-17
D681	407 201 2701	DIODE RB051L-40-TE25
D69A	407 004 0706	DIODE DCB015-TB
D69B	407 004 0706	DIODE DCB015-TB
D69C	407 149 0807	DIODE 1SS355-TE-17
D69D	407 149 0807	DIODE 1SS355-TE-17
MISCELLANEOUS		
⚠PC641	407 223 7302	PC TLP421F(D4-GB-TP4)
	407 223 8309	PC TLP421F(D4-GR-TP4)
⚠PC642	407 223 7302	PC TLP421F(D4-GB-TP4)
	407 223 8309	PC TLP421F(D4-GR-TP4)
⚠PC643	407 223 7302	PC TLP421F(D4-GB-TP4)
	407 223 8309	PC TLP421F(D4-GR-TP4)

P.F. BOARD

610 304 1636 ASSY,PWB,P.F. MA3A

Key No.	Part No.	Description
TRANSISTOR		
Q611	405 140 3704	TR 2SK2698
Q621	405 014 4509	TR 2SC2412K T146 R
	405 014 4608	TR 2SC2412K T146 S
	405 015 8704	TR 2SC2812-L6-TB
	405 015 8902	TR 2SC2812-L7-TB
	405 163 1602	TR 2SC2812N-L6-TB0
	405 163 1701	TR 2SC2812N-L7-TB0
	405 173 9803	TR 2SC3928A1R
	405 173 9902	TR 2SC3928A1S
Q622	405 134 5905	TR 2SA1037AK-T146-R
	405 147 2205	TR 2SA1037AK-S-T146
	405 002 0308	TR 2SA1037K T146 R
	405 002 0407	TR 2SA1037K T146 S
	405 002 6706	TR 2SA1179-M6-TB
	405 002 6904	TR 2SA1179-M7-TB
	405 163 1503	TR 2SA1179N-M6-TB
	405 163 2708	TR 2SA1179N-M7-TB
	405 173 9605	TR 2SA1235A1E
	405 173 9704	TR 2SA1235A1F
INTEGRATED CIRCUIT		
IC611	409 523 1400	IC FA5502M
CAPACITOR		
C611	403 222 1303	CERAMIC 1000P K 1K
C612	403 222 1303	CERAMIC 1000P K 1K
C615	403 275 6003	MT-POLYEST 1.5U J 400V
C617	404 085 9802	ELECT 180U M 450V
C618	403 323 8706	MT-POLYEST 0.047U K 450V
C62A	403 157 3304	CERAMIC 68P J 50V
C62B	403 157 6602	CERAMIC 470P K 50V
C62C	403 325 6304	CERAMIC 0.22U K 10V
C62D	403 164 0204	CERAMIC 0.1U Z 25V
C62E	403 164 0204	CERAMIC 0.1U Z 25V
C62F	403 370 9107	CERAMIC 0.068U K 50V
C62I	403 149 9208	CERAMIC 0.01U Z 50V
C62J	403 169 2807	CERAMIC 330P J 50V
C62K	403 323 3602	CERAMIC 0.047U K 50V
C62M	403 164 0204	CERAMIC 0.1U Z 25V
RESISTOR		
R61A	401 237 0007	MT-GLAZE 47K JA 1W
R61B	401 237 0007	MT-GLAZE 47K JA 1W
R61C	401 237 0007	MT-GLAZE 47K JA 1W
R61D	401 237 0007	MT-GLAZE 47K JA 1W
R61E	401 237 0007	MT-GLAZE 47K JA 1W
R61F	401 237 0007	MT-GLAZE 47K JA 1W
R613	402 088 0307	RESISTER 0.15 KA 2W
R614	402 088 0307	RESISTER 0.15 KA 2W
R615	401 242 3901	MT-GLAZE 240K JA 1/2W
R616	401 242 3901	MT-GLAZE 240K JA 1/2W
R617	401 259 9002	MT-GLAZE 150K FA 1/2W
R618	401 259 9002	MT-GLAZE 150K FA 1/2W
R619	401 259 9002	MT-GLAZE 150K FA 1/2W
R62A	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R62B	401 105 0603	MT-GLAZE 10K JA 1/16W
R62C	401 105 5509	MT-GLAZE 470K JA 1/16W
R62D	401 105 3802	MT-GLAZE 30K JA 1/16W
R62E	401 113 5805	MT-GLAZE 1.1K JA 1/16W
R62F	401 218 4406	MT-GLAZE 1.2K FA 1/16W
R62G	401 105 0405	MT-GLAZE 100 JA 1/16W
R62H	401 105 4007	MT-GLAZE 330 JA 1/16W

Key No.	Part No.	Description		
R62I	401 159 0604	MT-GLAZE	8.2 JA	1/16W
R62J	401 105 2607	MT-GLAZE	22 JA	1/16W
R62L	401 105 5301	MT-GLAZE	4.7K JA	1/16W
R62M	401 105 4502	MT-GLAZE	390 JA	1/16W
R62P	401 105 5400	MT-GLAZE	47K JA	1/16W
R62Q	401 105 2607	MT-GLAZE	22 JA	1/16W
R62R	401 177 2208	MT-GLAZE	5.6M JA	1/16W
R620	401 259 9002	MT-GLAZE	150K FA	1/2W
R623	401 105 5301	MT-GLAZE	4.7K JA	1/16W

VARIABLE RESISTOR

Key No.	Part No.	Description
VR611	645 002 3460	VR,SEMI,1K S

TRANSFORMER

Key No.	Part No.	Description
TSW611	645 027 4145	SWITCH,THERMAL
	645 031 0256	THERMOSTATS

COIL

Key No.	Part No.	Description
L611	645 048 4742	INDUCTOR,850U

DIODE

Key No.	Part No.	Description
DB611	407 202 7705	DIODE D10XB60
D613	407 149 6304	DIODE SFPB-54V
D614	407 191 3900	DIODE FML-G16S
D616	407 149 0807	DIODE 1SS355-TE-17
D617	407 149 0807	DIODE 1SS355-TE-17
D618	407 149 0807	DIODE 1SS355-TE-17
D619	407 149 0807	DIODE 1SS355-TE-17

MISCELLANEOUS

Key No.	Part No.	Description
FB611	610 229 3531	CORE
FB612	610 229 3531	CORE
FB613	610 229 3531	CORE
PTH611	408 037 4600	THERMISTOR NTH11D8R0LA

LINE FILTER BOARD

610 304 1643 ASSY,PWB,LINE FILTER MA3A

CAPACITOR

Key No.	Part No.	Description		
⚠C601	404 081 4702	MT-POLYEST	0.22U M	275V
⚠C602	404 081 4702	MT-POLYEST	0.22U M	275V
⚠C603	404 081 4702	MT-POLYEST	0.22U M	275V
⚠C604	404 081 4702	MT-POLYEST	0.22U M	275V

RESISTOR

Key No.	Part No.	Description		
⚠R601	401 287 5700	MT-GLAZE	220K JA	1W

VARIABLE RESISTOR

Key No.	Part No.	Description
⚠VA601	408 018 9808	VARISTOR ENC471D-14AS

COIL

Key No.	Part No.	Description
⚠L601	645 050 2231	LINE FILTER
⚠L602	645 025 7810	LINE FILTER

MISCELLANEOUS

Key No.	Part No.	Description		
⚠F601	423 022 2102	FUSE	250V	4A
F601A	645 000 5077	HOLDER,FUSE		
F601B	645 000 5077	HOLDER,FUSE		

R/C BOARD

610 304 1650 ASSY,PWB,R/C MA3A

CAPACITOR

Key No.	Part No.	Description		
C2801	403 304 2402	ELECT	100U M	10V
C2802	403 283 6309	CERAMIC	1U Z	10V
C2803	403 157 6602	CERAMIC	470P K	50V

RESISTOR

Key No.	Part No.	Description		
RC2801	645 034 5029	UNIT,REMOCON RECEIVER		
R2801	401 105 2706	MT-GLAZE	220 JA	1/16W
R2802	401 105 2706	MT-GLAZE	220 JA	1/16W
R2803	401 105 0405	MT-GLAZE	100 JA	1/16W

ACCESSORIES

Part No.	Description
645 054 3111	CABLE,MOUSE PS/2
645 054 3128	CABLE,MOUSE PS/2
645 039 7202	CABLE,MOUSE PS/2
610 298 7041	CARRY BAG-MD8A
645 057 2999	CABLE,INTERFACE VGA

OWNER'S MANUAL

Part No.	Description
610 303 2085	OWNER'S MANUAL-MA3E

REMOTE CONTROL

Part No.	Description
645 055 8627	ASSY,REMOCON CXLW
610 303 6489	RC-BATTERY LID-CXMA

AC CORD

Part No.	Description
645 064 6362	CORD,POWER-3.0MK,US

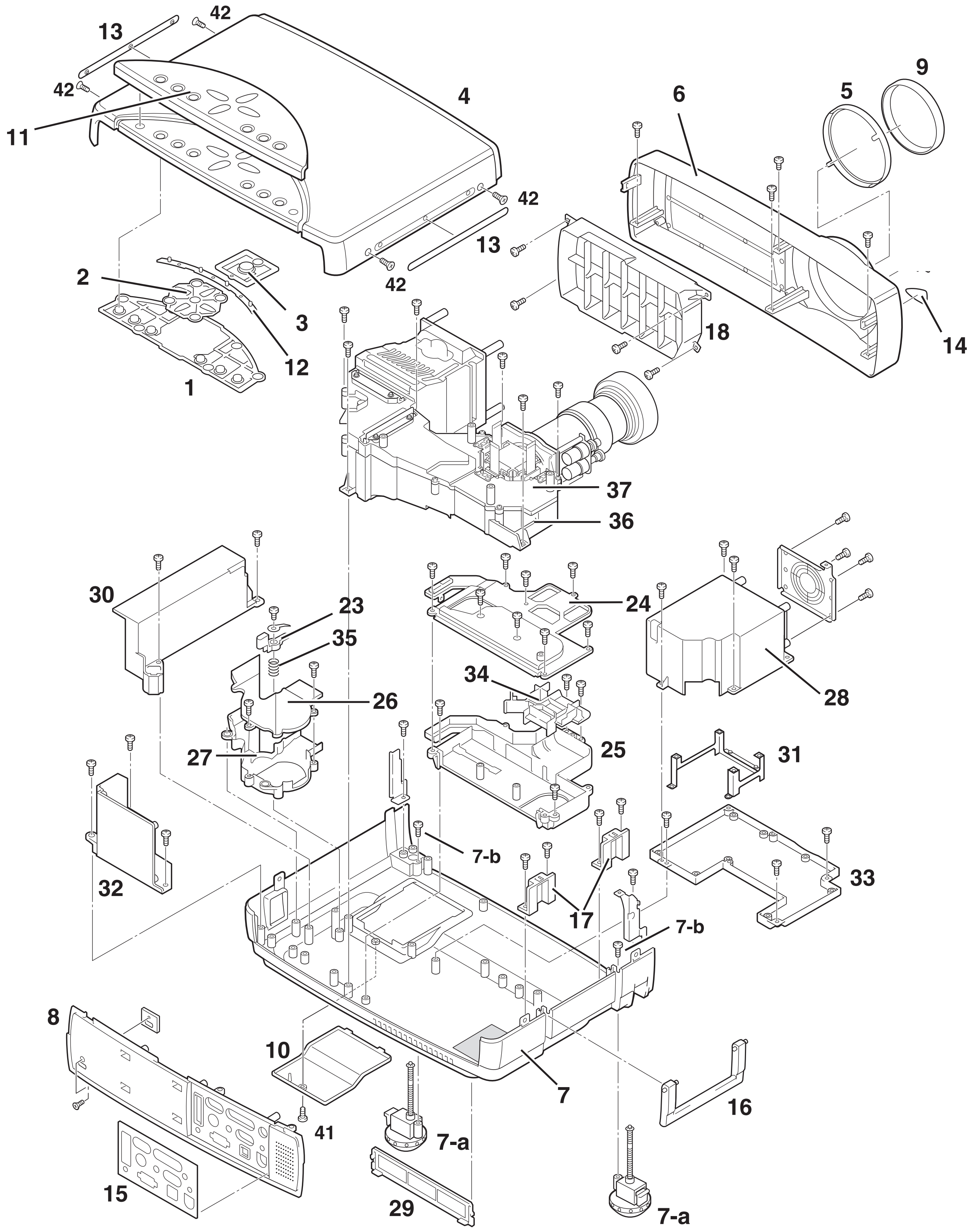
Electrical Parts List

Key No.	Part No.	Description	Key No.	Part No.	Description

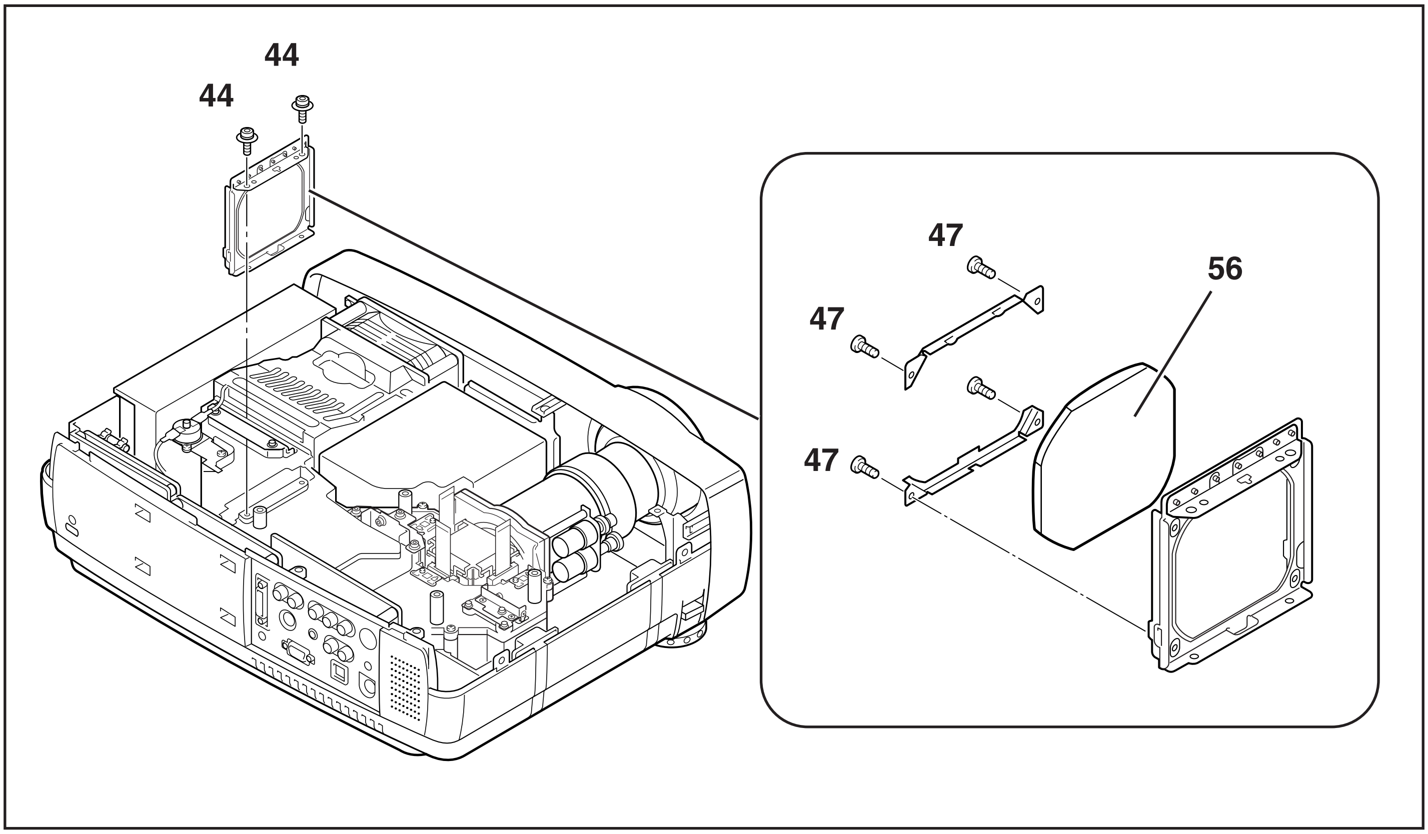
■ Mechanical Parts List

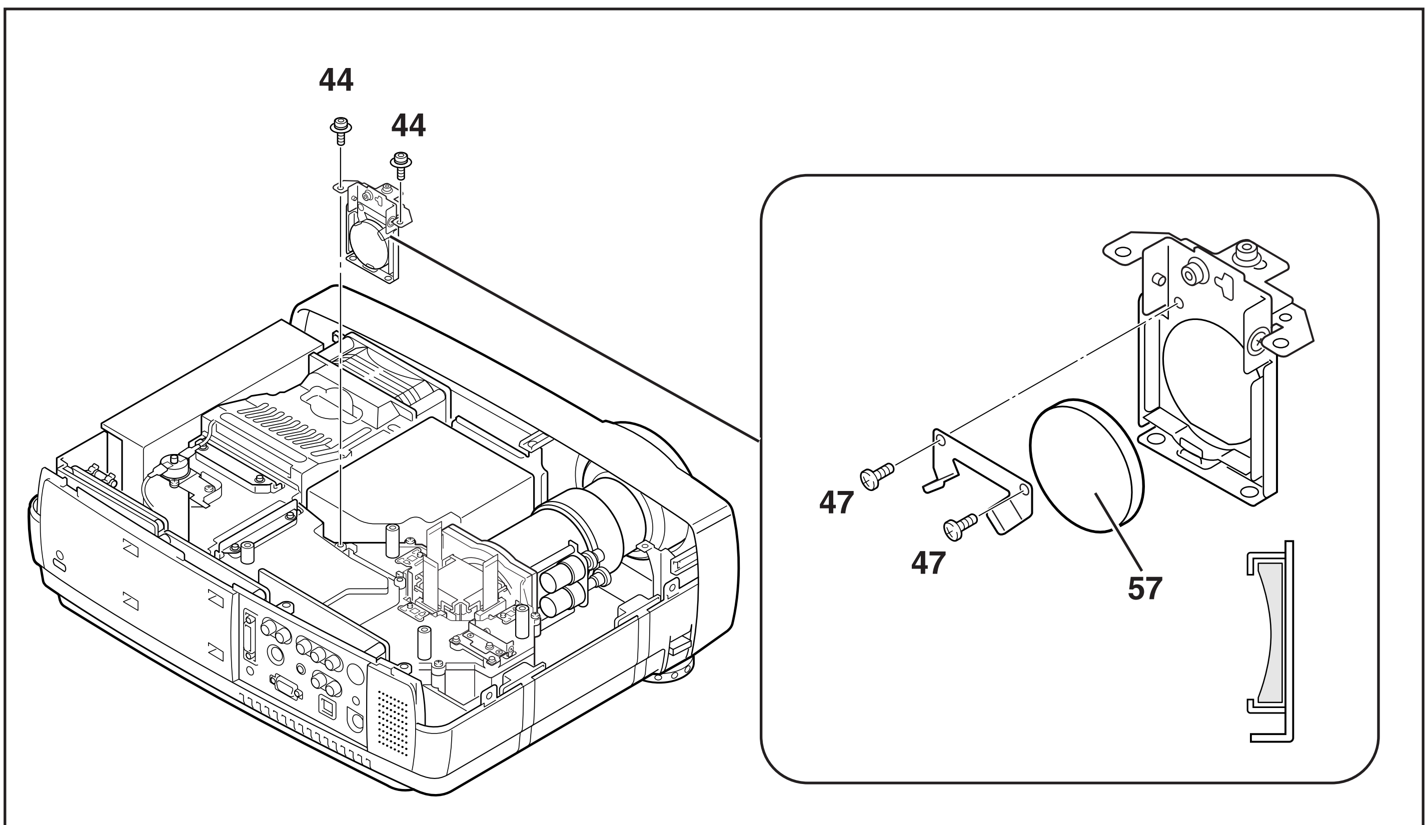
Note: Parts order must contain Chassis No., Part No., and Descriptions.

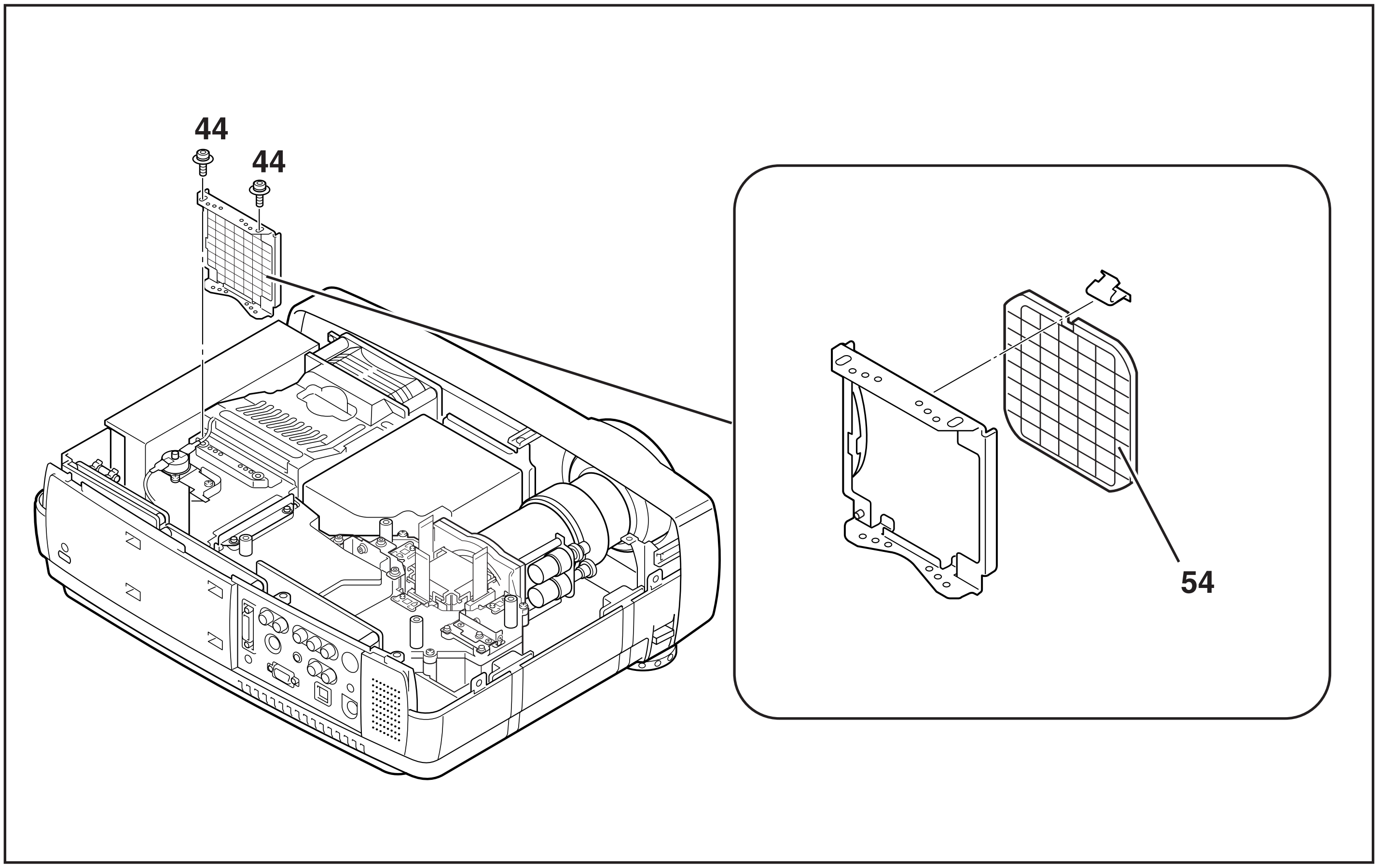
● Cabinet Parts

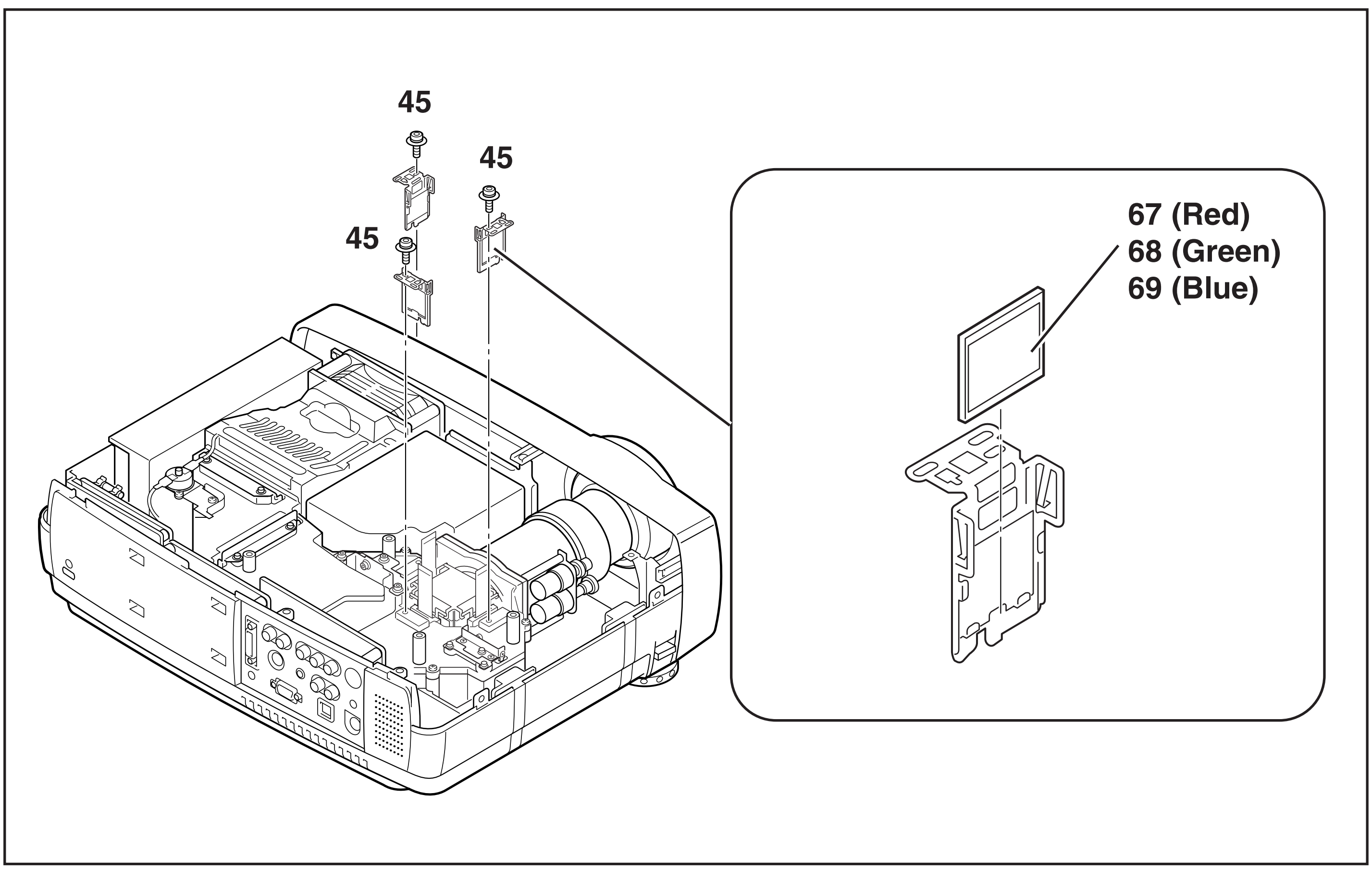


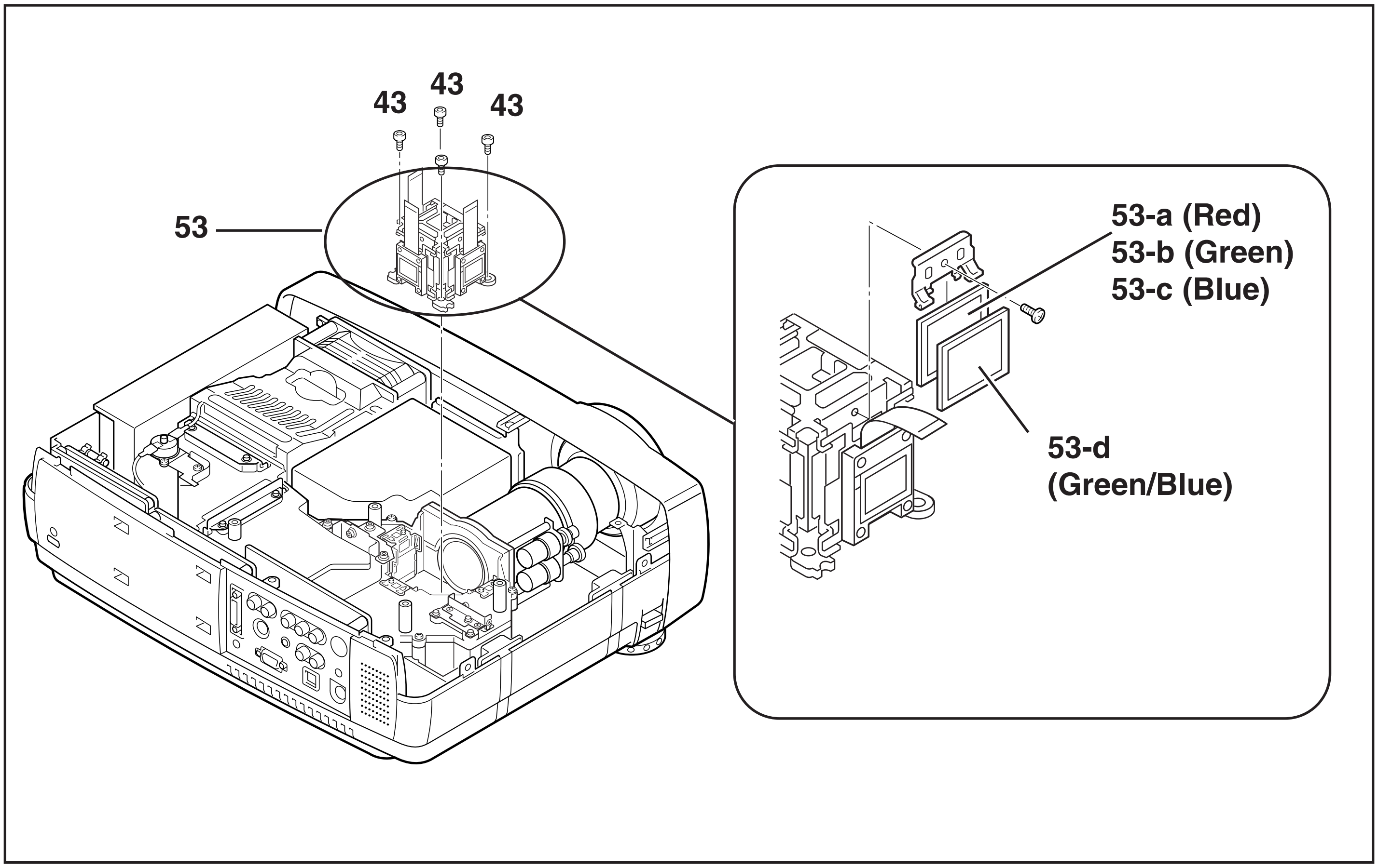
● Optical Parts

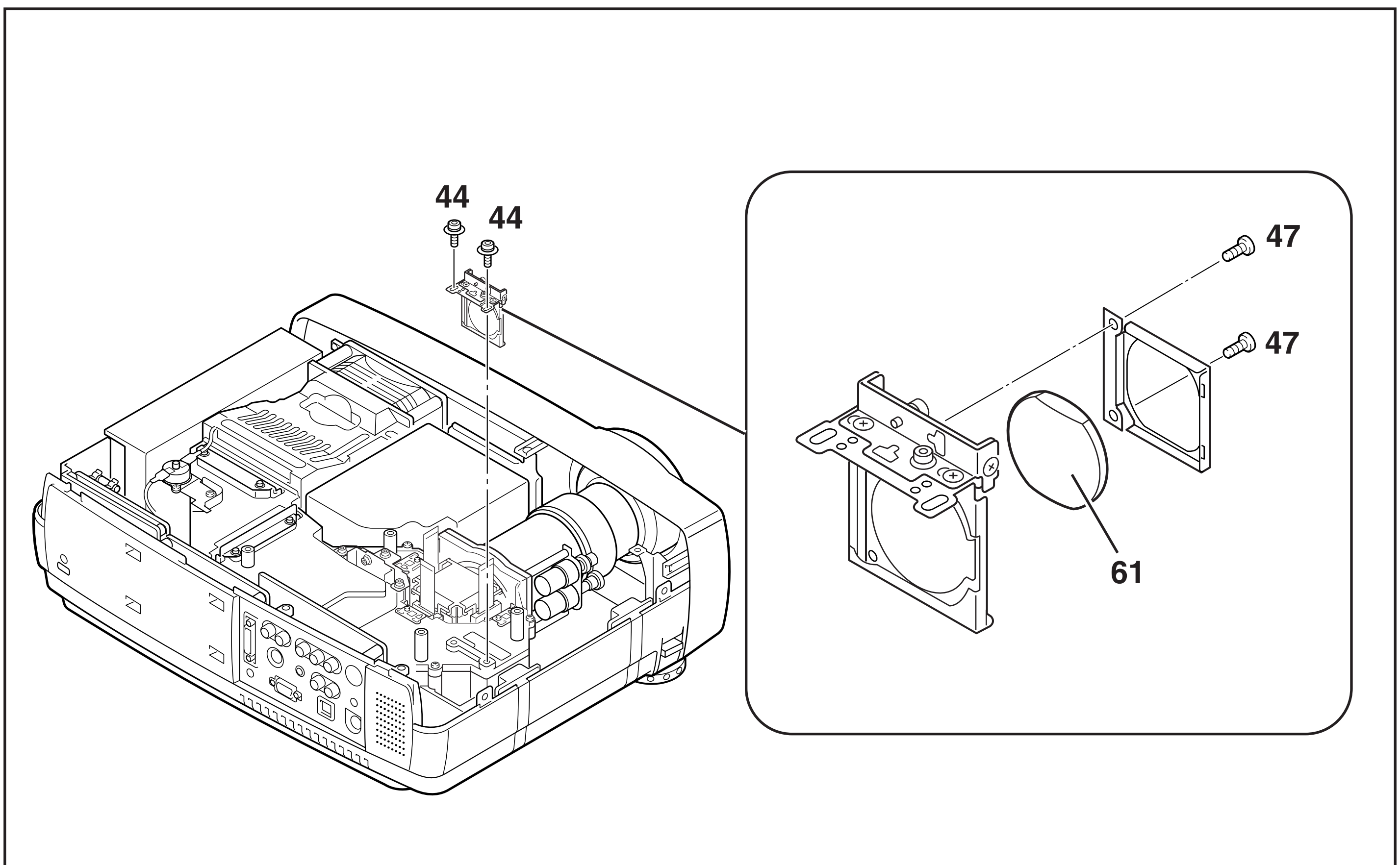


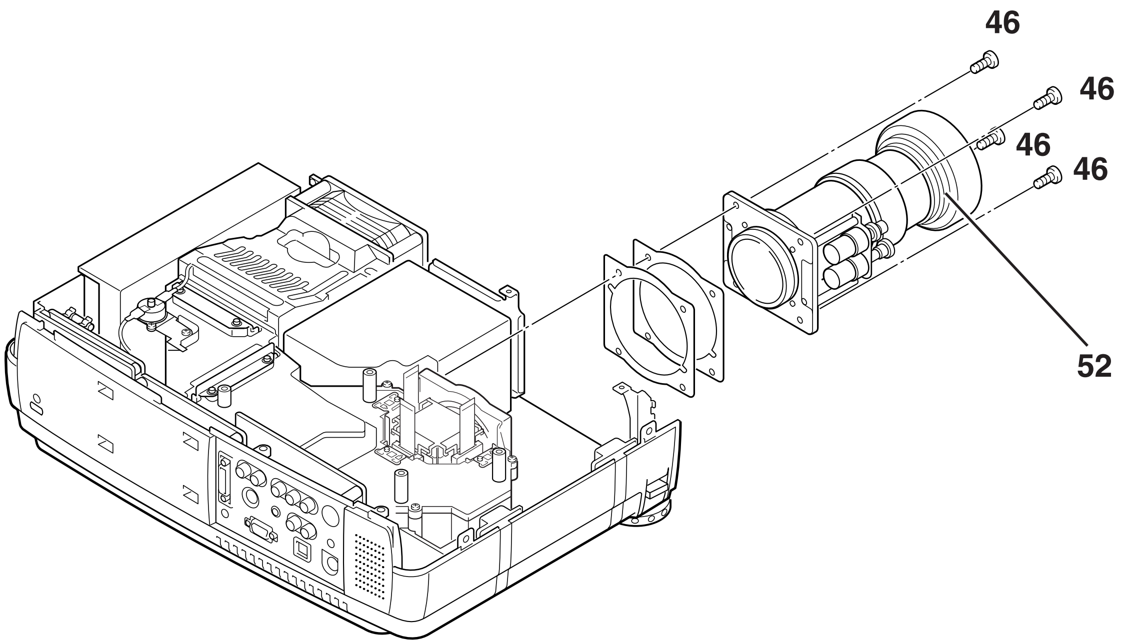


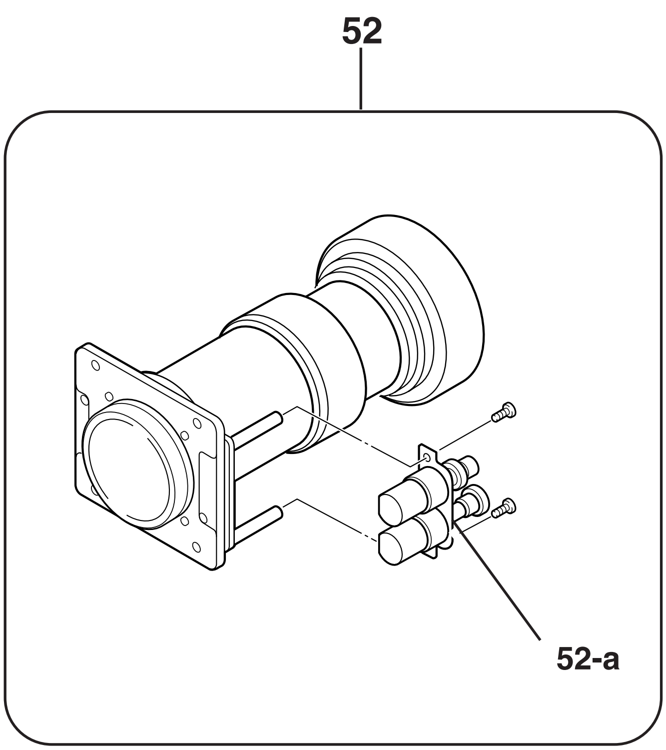

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44
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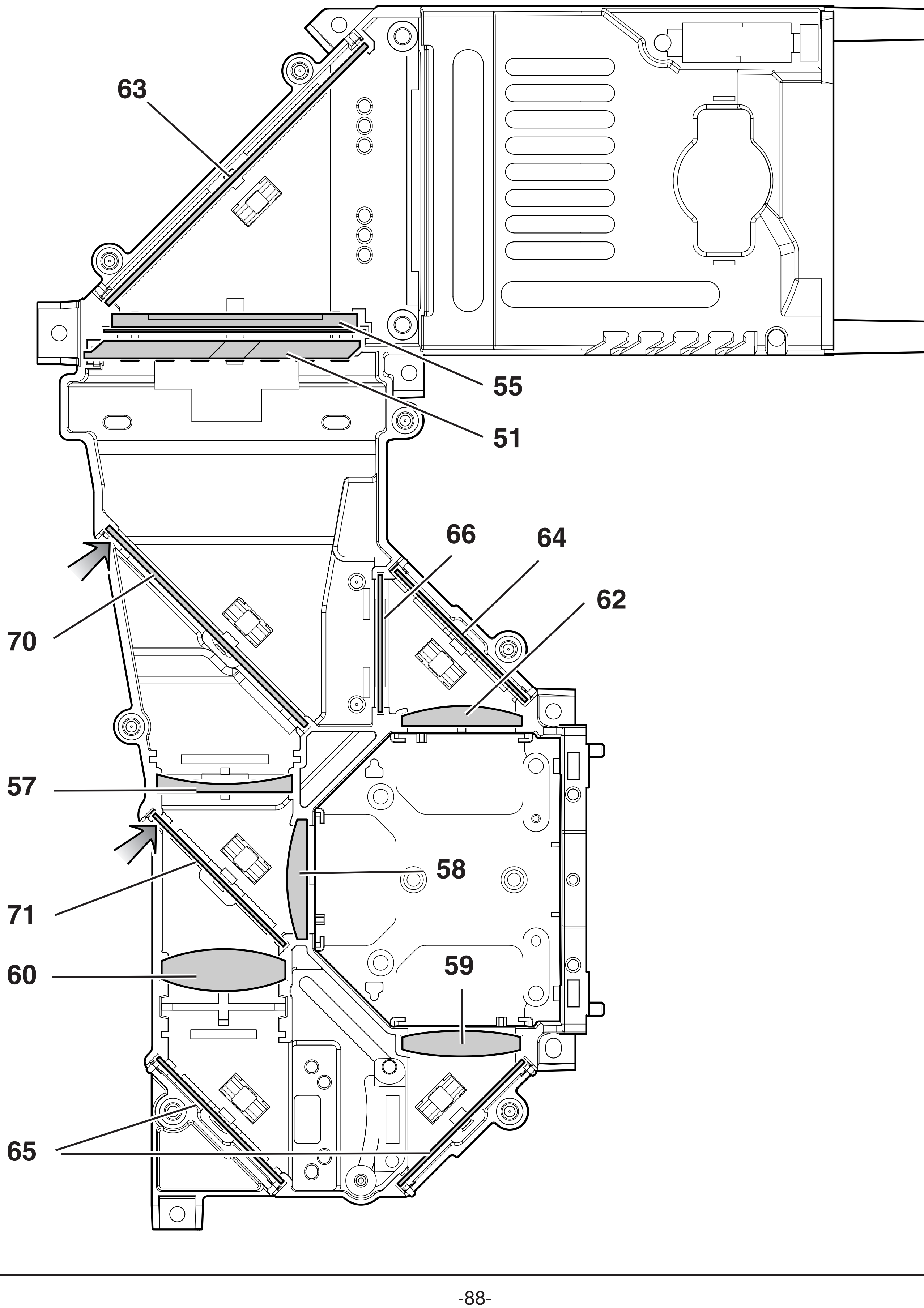

45
45
45
67 (Red)
68 (Green)
69 (Blue)


43
43
43
53
53-a (Red)
53-b (Green)
53-c (Blue)
53-d
(Green/Blue)


44
44
47
47
61


46
46
46
46
52


52
52-a


63
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65

Mechanical Parts List

Key No.	Part No.	Description
CABINET PARTS		
1	610 292 6972	BUTTON CONTROL-MS6B
2	610 292 6996	BUTTON ZOOM-MS6B
3	610 292 5654	BUTTON POWER-MS6A
4	610 292 7061	CABINET TOP-MS6L
5	610 297 2344	CABINET RING-MD8A
6	610 301 3701	CABINET FRONT SERVICE-MD8
	(Including Key No.5)	
7	610 298 4453	CABINET BOTTOM-MD8E
	(Including Key No.7-a and b)	
7-a	610 292 6941	ASSY,STAND LEG-MS6B
OR	610 302 6107	ASSY,STAND LEG-MK8B
7-b	411 025 6500	SCR S-TPG BIN 3X8
8	610 292 7191	CABINET BACK-MS6L
9	610 297 2481	CAP LNS-MD8A
10	610 292 7245	COVER LMP-MS6L
11	610 292 7283	COVER CABI TOP-MS6L
12	610 292 7306	DEC LED-MS6A
13	610 294 1548	DEC SASH-MS6A
14	610 292 7320	DEC AV SHEET-MS6B
15	610 310 8162	DEC SHEET RC-MD8A
16	610 292 7399	HANDLE-MS6L
17	610 292 5753	HOLDER HANDLE-MS6A
18	610 297 2665	MOUNTING DUCT FR-MD8A
CHASSIS PARTS		
23	610 294 1760	ARM SW-MS6A
24	610 292 6040	COVER DUCT TOP-MS6A
25	610 292 6064	COVER DUCT BTM-MS6A
26	610 292 6088	COVER DUCT LMP PWB TOP-MS
27	610 292 6095	COVER DUCT LMP PWB BTM-MS
28	610 292 6101	COVER MAIN POW-MS6A
29	610 292 6125	FILTER BASE A-MS6A
30	610 298 4088	HOLDER LMP PWB-MD8A
31	610 294 5249	HOLDER POWER PCB A-MS6A
32	610 292 5760	MOUNTING SW-MS6A
33	610 292 6408	MOUNTING MAIN POWER-MS6A
34	610 297 3150	MOUNTING DUCT-MD8A
35	610 294 4501	SPRING INT LOCK-MS6A
36	610 304 7591	OPTICAL BASE BTM-A MS6A
37	610 304 7607	OPTICAL BASE TOP-A MS6A
SCREWS-CABINET-		
41	411 001 8801	SCR BIN 3X6
42	411 052 9109	SCR OVL 3X6
43	412 058 5409	SPECIAL SCREW
44	411 174 9308	BOLT HEX-SCT+SW+W 2.5X6
45	411 098 3604	SCR S-TPG FLT 3X10
46	411 037 4105	SCR PAN+W 3X10
47	411 002 4901	SCR PAN 2X4

Key No.	Part No.	Description
OPTICAL PARTS		
51	645 046 8483	ASSY,PRISM(PBS)
52	645 057 1466	ASSY,LENS,PROJECTION
	(Including Key No.52-a)	
52-a	645 057 1480	MOTOR,LENS
53	610 305 4698	ASSY,LCD PRISM-MA3A
	(Including Key No. 53-a, b, c and d)	
53-a	645 057 1312	POLARIZED GLASS(OUT/R)
53-b	645 057 1329	POLARIZED GLASS(OUT/G)
53-c	645 057 1336	POLARIZED GLASS(OUT/B)
53-d	645 060 3815	PREPOLARIZED GLASS(CRYST)
OR	645 060 4454	PREPOLARIZED GLASS(SAG)
54	645 057 1251	LENS,INTEGRATOR(IN)
55	645 057 1268	LENS,INTEGRATOR(OUT)
56	645 046 8087	LENS,CONDENSER(IN)
OR	645 051 1318	LENS,CONDENSER(IN)
57	645 046 8094	LENS,CONDENSER(OUT)
OR	645 051 1325	LENS,CONDENSER(OUT)
58	645 046 8100	LENS,CONDENSER
OR	645 051 1332	LENS,CONDENSER
59	645 046 8117	LENS,CONDENSER (R)
OR	645 051 1349	LENS,CONDENSER (R)
60	645 046 8124	LENS,RELAY(IN)
OR	645 051 1356	LENS,RELAY(IN)
61	645 046 8131	LENS,RELAY(OUT)
OR	645 051 1363	LENS,RELAY(OUT)
62	645 050 2040	LENS,CONDENSER (B)
63	645 047 1797	MIRROR(W-COLD)
64	645 047 1803	MIRROR(B)
65	645 047 1810	MIRROR(R)
66	645 059 4908	OPTICAL FILTER(UV CUT)
67	645 057 1282	POLARIZED GLASS(IN/R)DM
68	645 057 1299	POLARIZED GLASS(IN/G)
69	645 057 1305	POLARIZED GLASS(IN/B)
70	645 047 1933	DICHROIC MIRROR (B)
71	645 057 1350	DICHROIC MIRROR (G)

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Schematic Diagrams
Printed Wiring Board Drawings

Model	Chassis No.
CP-320t	MA3-CP-320t00

These schematic diagrams and printed wiring board drawings are part of the service manual original for chassis No. MA3-CP-320t00 model CP-320t.
File with the service manual No. SM5110523-00.

Note:
All the information of part numbers and values indicated on these diagrams are at the beginning of production. To improve the performance, there may be some differences to the actual set. When you order the service parts, use service parts code mentioned on the parts list in this service manual.

■ Parts description and reading in schematic diagram

1. The parts specification of resistors, capacitors and coils are expressed in designated code. Please check the parts description by the following code table.
2. Some of transistors and diodes are indicated in mark for the substitution of parts name. Please check the parts name by the following code table.
3. Voltages and waveforms were taken with a video color bar signal(1Vp-p at 75 ohms terminated) and controls to normal.
4. Voltages were taken with a high-impedance digital voltmeter.

Capacitor Reading

Example 2000 K K 1000 BG

Example 160 E M 10

- BG — Characteristic
- 1000 / 10 — Capacitance value: Excepting electric capacitors, all capacitance values of less than 1 are expressed in μF and more than 1 are in pF.
- K / M — Tolerance
- K / E — Type
- 2000 / 160 — Rated voltage

Material table

Mark	Material
E	Electrolytic
P	Electrolytic (non-polarized)
C	Ceramic (temperature compensation)
K	Ceramic
F	Polyester
N	Polypropylene
M	Metalized polypropylene
H	Metalized polypromylar
B	Ceramic (semiconductor)
G	Metalized polyestel
Y	Composite film
S	Styrol
T	Tantalum oxide solid electrolytic
U	Organic semiconductive electrolyte
D	Electric double layer electrolytic

Tolerance table

Mark	Tolerance	
A	not specified	
B	±0.1	
C	±0.25	
D	±0.5	
F	±1	
G	±2	
E	±2.5	
H	±3	
J	±5	
K	± 0	
M	±20	
N	±30	
P	+100	-0
Q	+30	-10
T	+50	-10
U	+75	-10
V	+20	-10
W	+100	-10
X	+40	-20
Y	+150	-10
Z	+80	-20

Coil Reading

Example L2 C1 4R7 K N

- K — Tolerance
- 4R7 — Inductance value
- C1 — Manufacture code
- L2 — Unique code

Mark	Tolerance (nH)	Mark	Tolerance (%)
C	±0.25	G	±2
D	±0.5	J	±5
S	±0.3	K	±10
A	±0.2	L	±15
		M	±20

Resistor Reading

Example 1/2 D J 10K B

Example 6 W K 8.2

Example 1/2 C K 1M

- B — Characteristic: Z (Carbon fuse), B (Non-burnable)
- 10K / 8.2 / 1M — Resistance value: K indicates in K, M indicate in M
- J / K — Tolerance (see below table)
- D / W / C — Material (see below table)
- 1/2 / 6 — Rated wattage (W)

Note: Resistor which is indicated with resistance value only are 1/6W carbon resistor. Resistor which is indicated with material, tolerance and value are 1/4W rated wattage.

Material table

Mark	Material
D	Carbon
N	Metal film
S	Oxide metal film
C	Solid
G	Metal glaze
W	Wire wounding or cement
H	Ceramic
F	Fusible

Tolerance table

Mark	Tolerance
A	±0.05
B	±0.1
C	±0.25
D	±0.5
F	±1
G	±2
J	±5
K	±10
M	±20
P	+5 -15
Z	used in 0 ohm

Diode/Transistor Type Reading

Diode

Mark	Type number
R	1S2076A,1S2473,1N4148
AA	1S2076A,1S2473,1SS133,1N4148

Transistor

(1) NPN type

Mark	Type number				
--	2SC536	2SC945A	2SC1815	2SC1740S	
AD	NF, NG	PA, QA	Y, GR	Q, R, S	
AE	NF, NG	PA, QA, RA	O, Y, GR	Q, R, S	

(2) PNP type

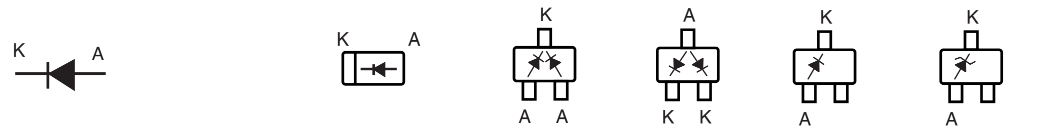
Mark	Type number				
--	2SA608	2SA564A	2SA1015	2SA933S	
AB	NF	R	Y, GR	R	
AC	NF	Q, R	O, Y, GR	Q, R	

(3) Chip type

Mark	Type number				
--	2SA1179/N	2SA1037K	2SA1037AK	2SC2812/N	2SC2412K
AJ	M6, M7	R, S	R, S		
AH				L6, L7	R, S

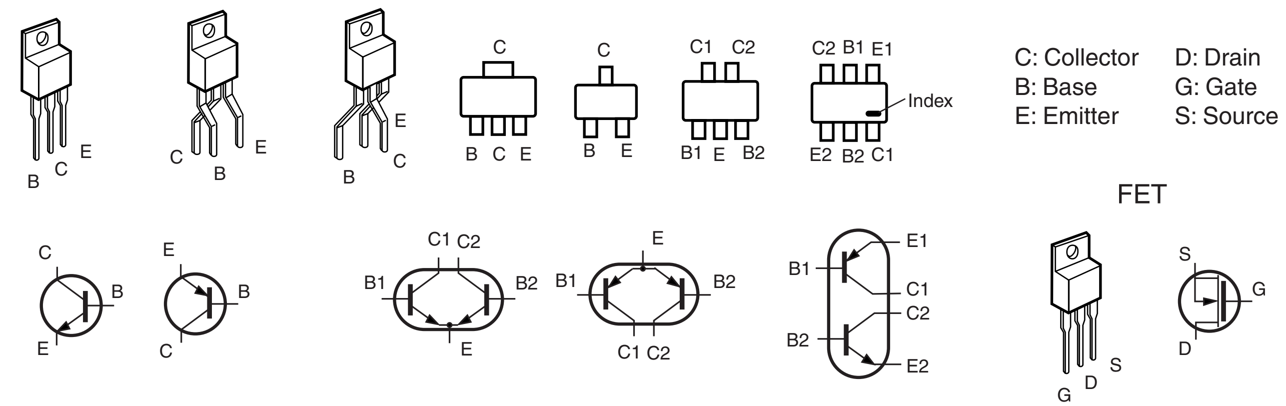
■ Pin description of diode, transistor and IC

● Diode



K: Cathode
A: Anode

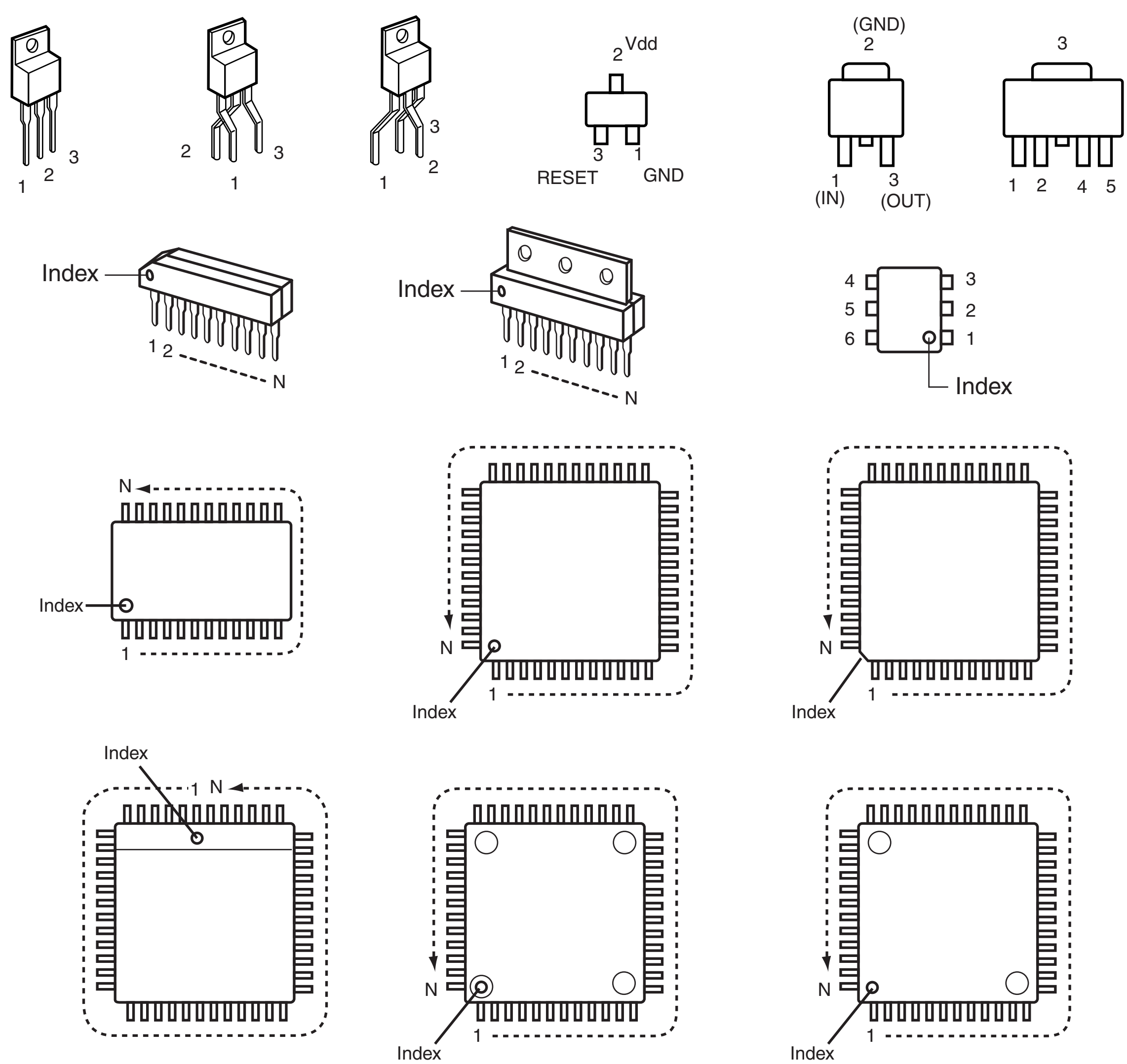
● Transistor/FET

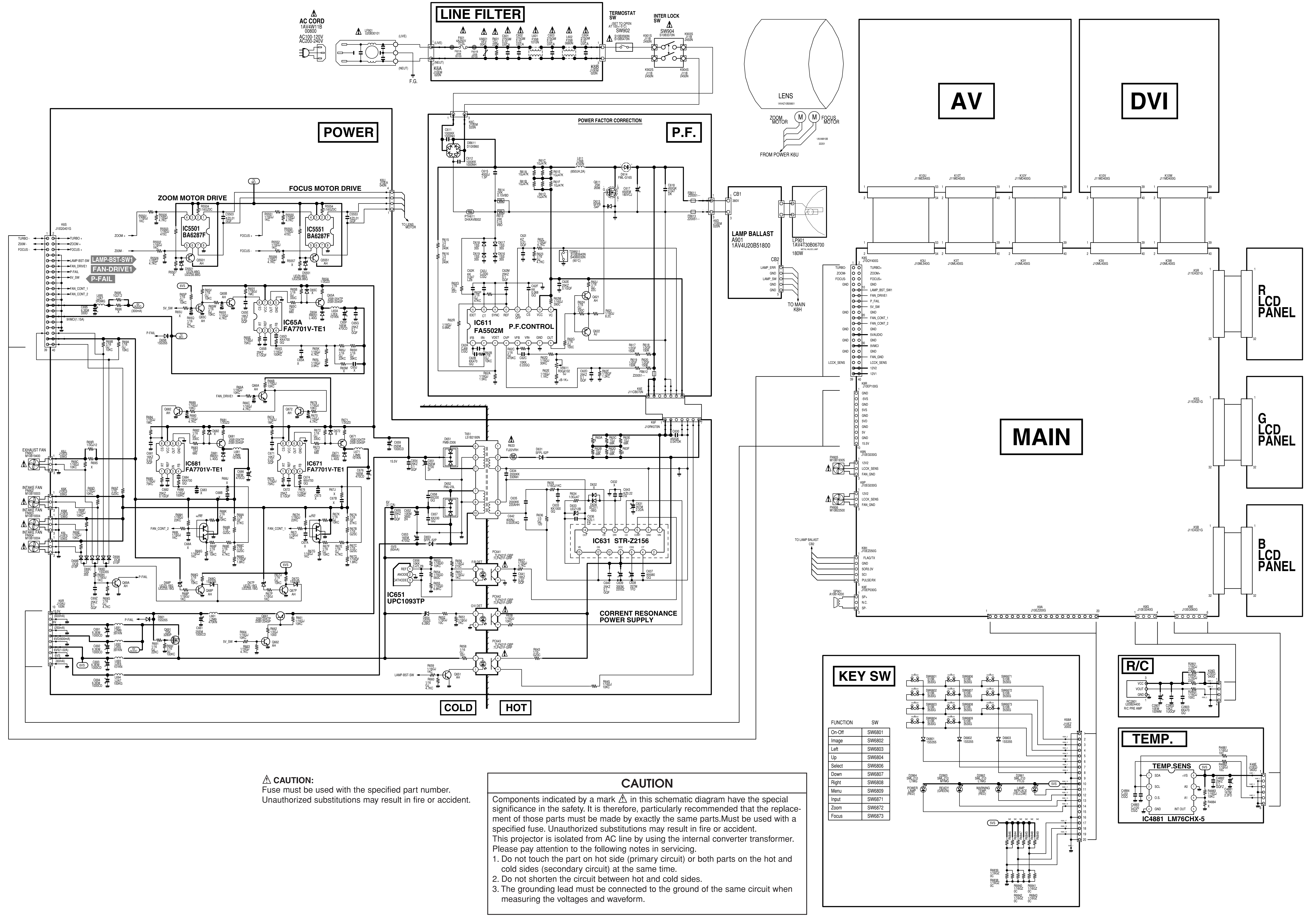


C: Collector
B: Base
E: Emitter

D: Drain
G: Gate
S: Source

● IC





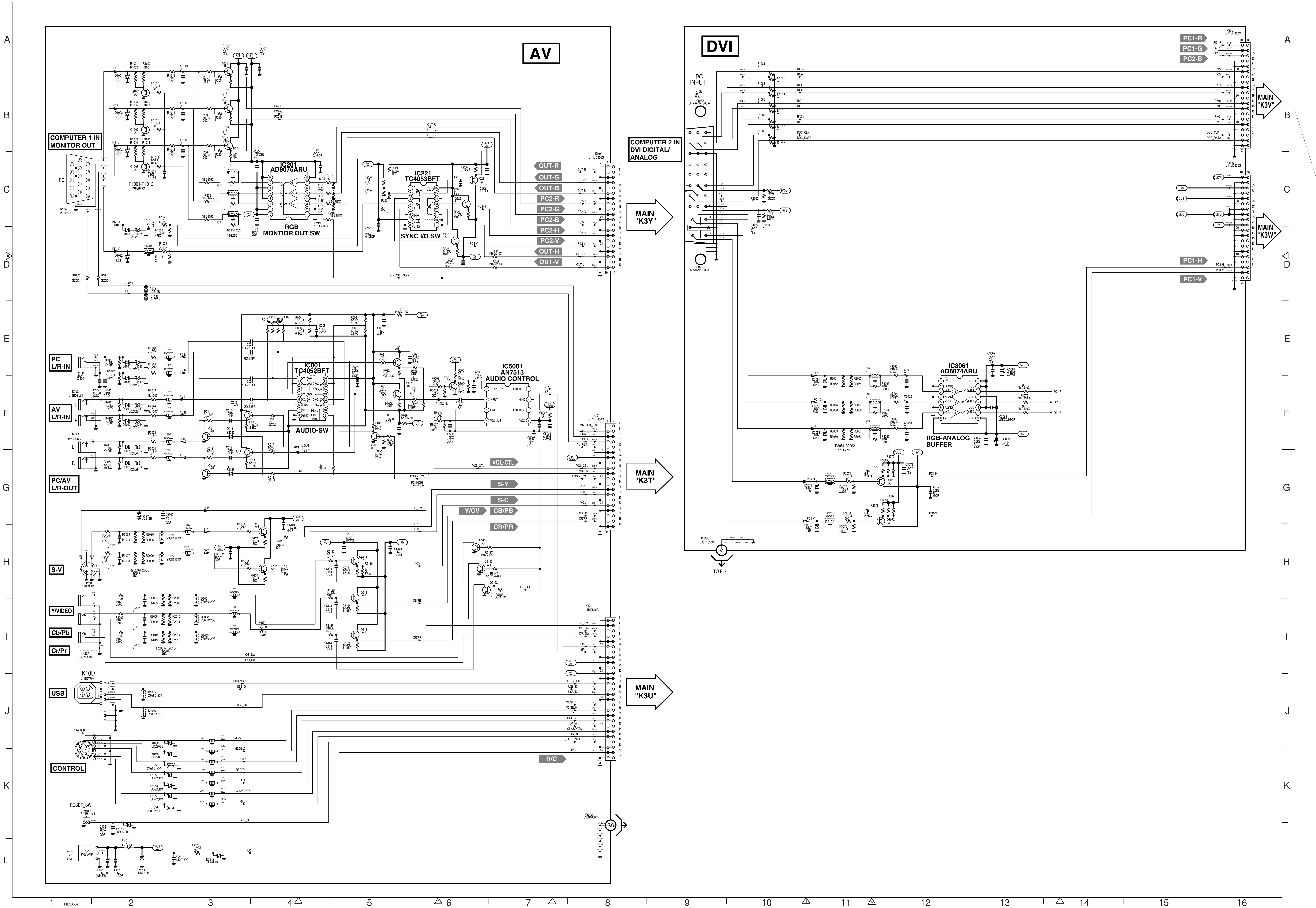
FUNCTION	SW
On-Off	SW6801
Image	SW6802
Left	SW6803
Up	SW6804
Select	SW6806
Down	SW6807
Right	SW6808
Menu	SW6809
Input	SW6871
Zoom	SW6872
Focus	SW6873

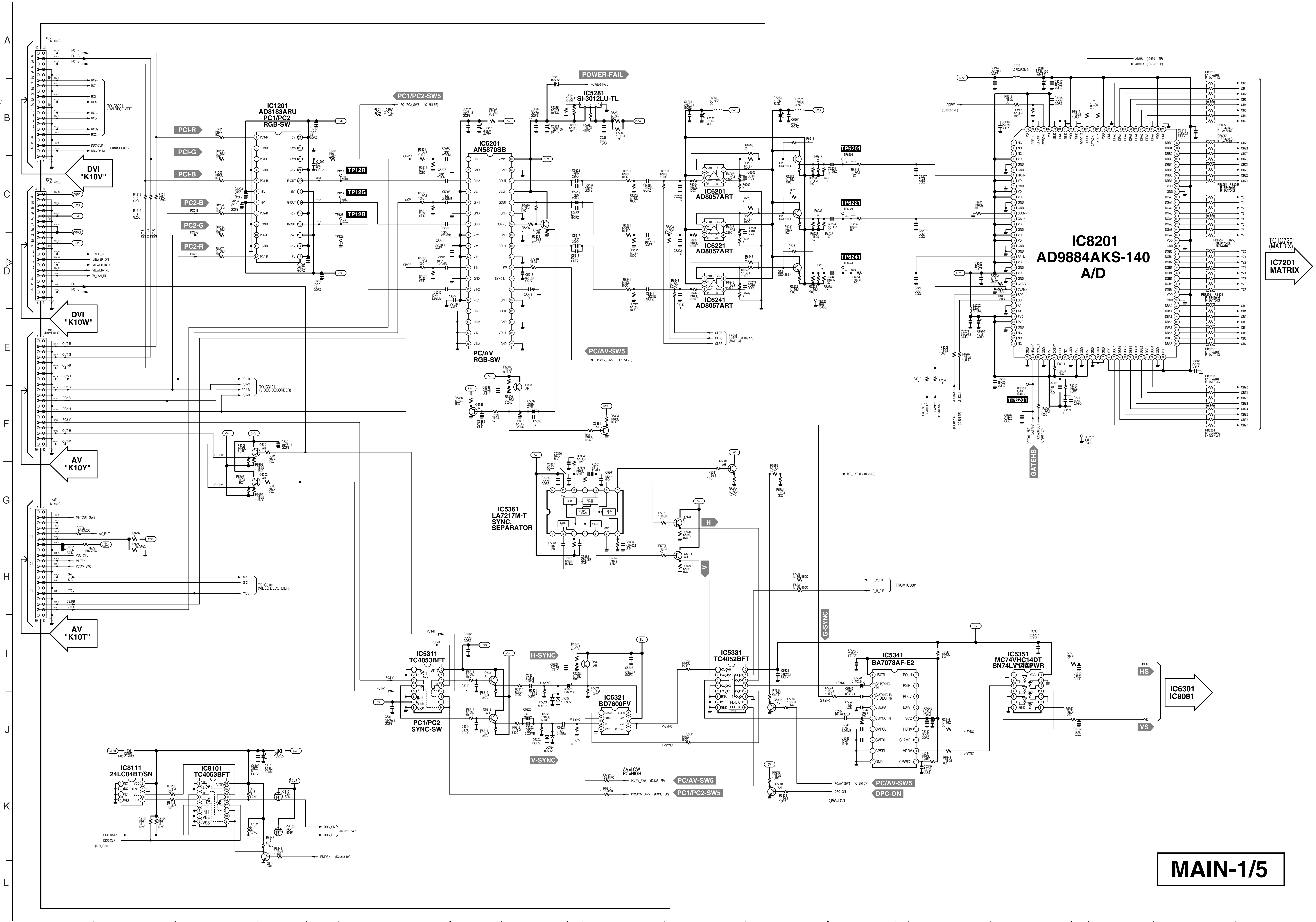
⚠ CAUTION:
Fuse must be used with the specified part number.
Unauthorized substitutions may result in fire or accident.

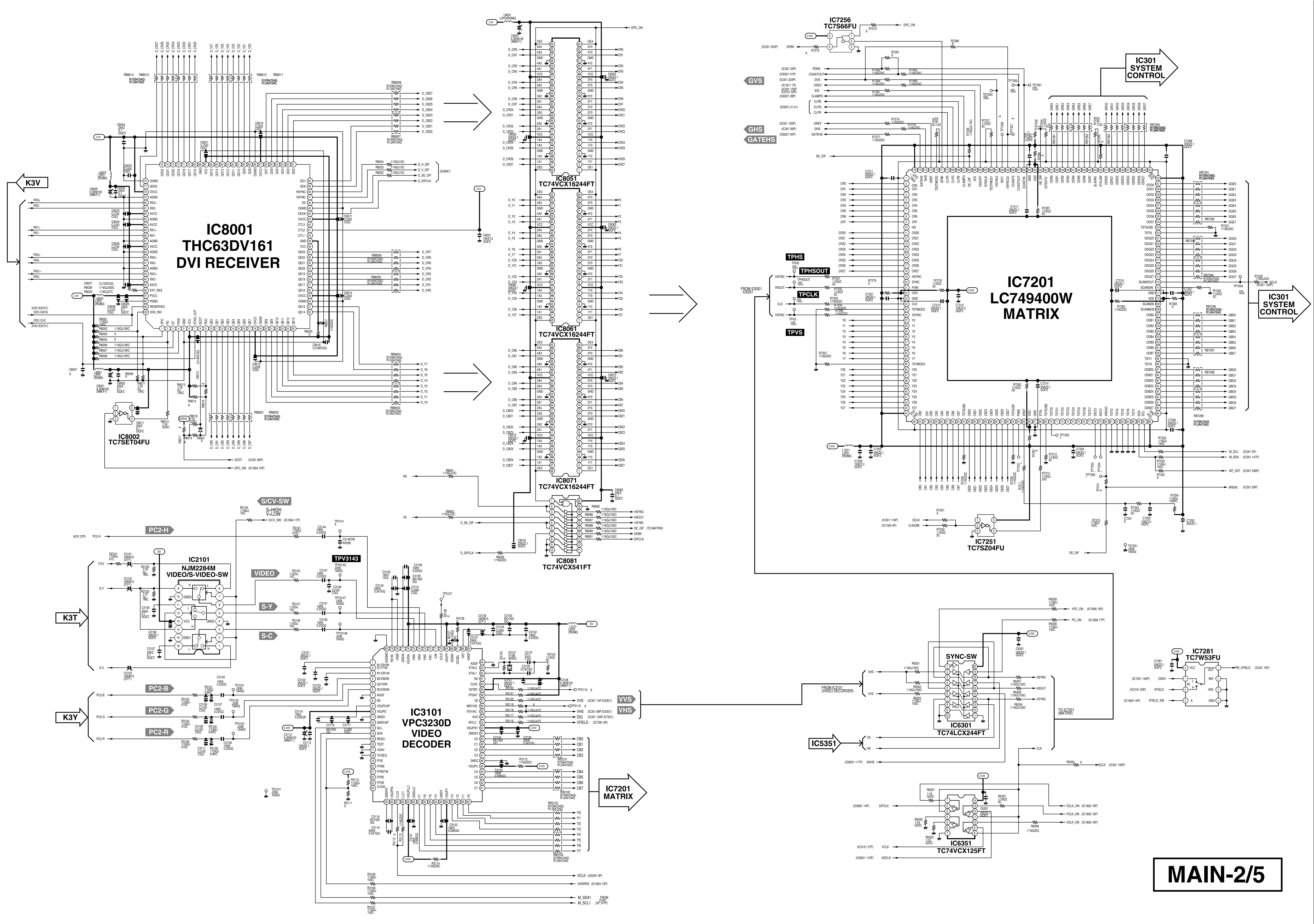
CAUTION

Components indicated by a mark ⚠ in this schematic diagram have the special significance in the safety. It is therefore, particularly recommended that the replacement of these parts must be made by exactly the same parts.Must be used with a specified fuse. Unauthorized substitutions may result in fire or accident.
This projector is isolated from AC line by using the internal converter transformer. Please pay attention to the following notes in servicing.

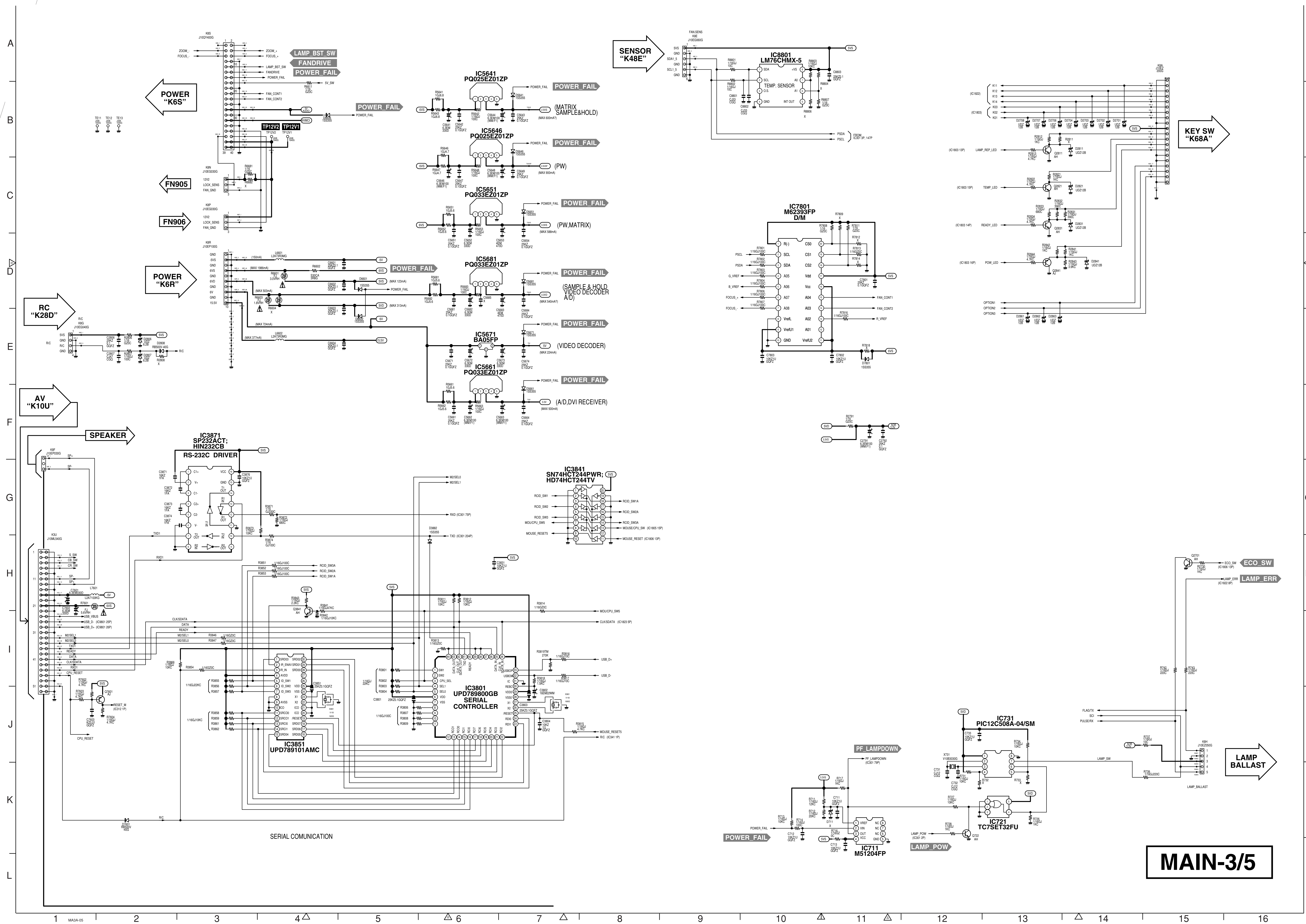
1. Do not touch the part on hot side (primary circuit) or both parts on the hot and cold sides (secondary circuit) at the same time.
2. Do not shorten the circuit between hot and cold sides.
3. The grounding lead must be connected to the ground of the same circuit when measuring the voltages and waveform.


AV
DVI
COMPUTER 1 IN MONITOR OUT
COMPUTER 2 IN DVI DIGITAL/ ANALOG
PC INPUT
IC201 AD8075ARU
RGB MONTIOR OUT SW
IC221 TC4053BFT
SYNC I/O SW
IC001 TC4052BFT
AUDIO-SW
IC5001 AN7513 AUDIO CONTROL
IC3061 AD8074ARU
RGB-ANALOG BUFFER
PC L/R-IN
AV L/R-IN
PC/AV L/R-OUT
S-V
Y/VIDEO
Cb/Pb
Cr/Pr
USB
CONTROL
RESET_SW
MAIN "K3Y"
MAIN "K3T"
MAIN "K3U"
MAIN "K3V"
MAIN "K3W"
OUT-R
OUT-G
OUT-B
PC2-R
PC2-G
PC2-B
PC2-H
PC2-V
OUT-H
OUT-V
PC1-R
PC1-G
PC1-B
PC1-H
PC1-V
VOL-CTL
S-Y
S-C
Y/CV
CB/PB
CR/PR
R/C
TO F.G.

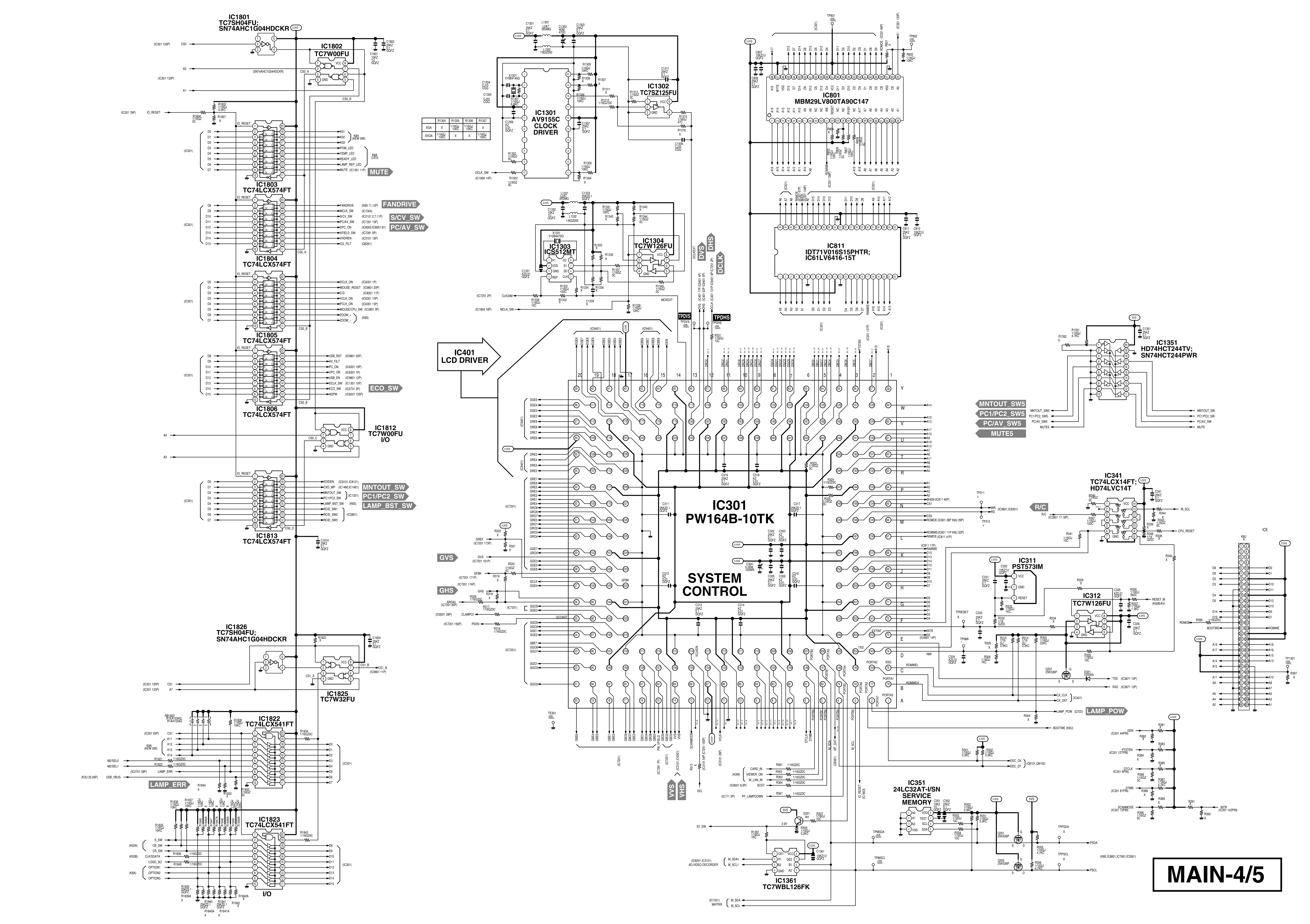

IC1201
AD8183ARU
PC1/PC2
RGB-SW
IC5201
AN5870SB
PC/AV
RGB-SW
IC5281
SI-3012LU-TL
POWER-FAIL
PC1/PC2-SW5
PC1=LOW
PC2=HIGH
IC6201
AD8057ART
IC6221
AD8057ART
IC6241
AD8057ART
TP6201
TP6221
TP6241
IC8201
AD9884AKS-140
A/D
TO IC7201
(MATRIX)
IC7201
MATRIX
TP8201
GATEHS
DVI
"K10V"
DVI
"K10W"
AV
"K10Y"
AV
"K10T"
PCI-R
PCI-G
PCI-B
PC2-B
PC2-G
PC2-R
TP12R
TP12G
TP12B
PC/AV-SW5
TO IC3101
(VIDEO DECORDER)
IC5361
LA7217M-T
SYNC.
SEPARATOR
H
V
FROM IC8001
G-SYNC
IC5311
TC4053BFT
PC1/PC2
SYNC-SW
H-SYNC
V-SYNC
IC5321
BD7600FV
AV=LOW
PC=HIGH
PC/AV-SW5
PC1/PC2-SW5
IC5331
TC4052BFT
IC5341
BA7078AF-E2
IC5351
MC74VHC14DT
SN74LV14APWR
HS
VS
IC6301
IC8081
PC/AV-SW5
DPC-ON
LOW=DVI
IC8111
24LC04BT/SN
IC8101
TC4053BFT
MAIN-1/5

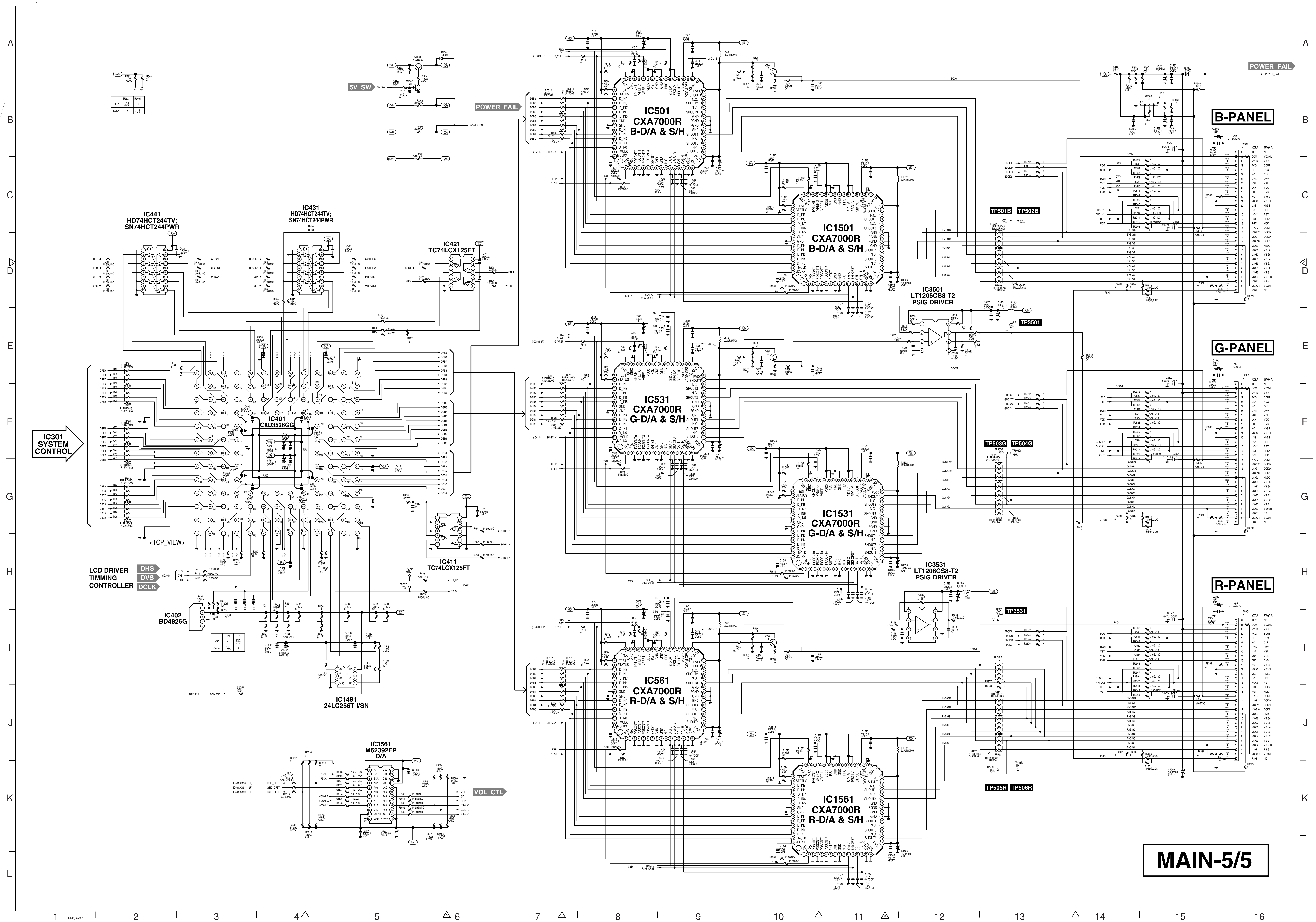


IC8001
THC63DV161
DVI RECEIVER
IC8002
TC7SET04FU
K3V
IC8051
TC74VCX16244FT
IC8061
TC74VCX16244FT
IC8071
TC74VCX16244FT
IC8081
TC74VCX541FT
IC7256
TC7S66FU
IC301
SYSTEM
CONTROL
GVS
GHS
GATEHS
TPHS
TPHSOUT
TPCLK
TPVS
IC7201
LC749400W
MATRIX
IC7251
TC7SZ04FU
S/CV-SW
S=HIGH
V=LOW
PC2-H
IC2101
NJM2284M
VIDEO/S-VIDEO-SW
TPV3143
VIDEO
S-Y
S-C
K3T
PC2-B
PC2-G
PC2-R
K3Y
IC3101
VPC3230D
VIDEO
DECODER
IC7201
MATRIX
VVS
VHS
SYNC-SW
IC6301
TC74LCX244FT
IC5351
IC6351
TC74VCX125FT
IC7281
TC7W53FU
MAIN-2/5



POWER "K6S"
FN905
FN906
POWER "K6R"
RC "K28D"
AV "K10U"
SPEAKER
SENSOR "K48E"
KEY SW "K68A"
LAMP BALLAST
IC5641 PQ025EZ01ZP
IC5646 PQ025EZ01ZP
IC5651 PQ033EZ01ZP
IC5681 PQ033EZ01ZP
IC5671 BA05FP
IC5661 PQ033EZ01ZP
(MATRIX SAMPLE&HOLD)
(PW)
(PW,MATRIX)
(SAMPLE & HOLD VIDEO DECODER A/D)
(VIDEO DECODER)
(A/D,DVI RECEIVER)
IC8801 LM76CHMX-5
TEMP. SENSOR
IC7801 M62393FP D/M
IC3871 SP232ACT; HIN232CB
RS-232C DRIVER
IC3841 SN74HCT244PWR; HD74HCT244TV
IC3801 UPD789800GB SERIAL CONTROLLER
IC3851 UPD789101AMC
SERIAL COMUNICATION
IC731 PIC12C508A-04/SM
IC721 TC7SET32FU
IC711 M51204FP
POWER_FAIL
LAMP_BST_SW
FANDRIVE
PF_LAMPDOWN
LAMP_POW
ECO_SW
LAMP_ERR
TP12V2
TP12V1
MAIN-3/5


IC1801
TC7SH04FU;
SN74AHC1G04HDCKR
IC1802
TC7W00FU
IC1803
TC74LCX574FT
IC1804
TC74LCX574FT
IC1805
TC74LCX574FT
IC1806
TC74LCX574FT
IC1812
TC7W00FU
I/O
IC1813
TC74LCX574FT
IC1826
TC7SH04FU;
SN74AHC1G04HDCKR
IC1825
TC7W32FU
IC1822
TC74LCX541FT
IC1823
TC74LCX541FT
I/O
MUTE
FANDRIVE
S/CV_SW
PC/AV_SW
ECO_SW
MNTOUT_SW
PC1/PC2_SW
LAMP_BST_SW
LAMP_ERR
IC1301
AV9155C
CLOCK
DRIVER
IC1302
TC7SZ125FU
IC1303
ICS512MT
IC1304
TC7W126FU
DVS
DHS
DCLK
TPDVS
TPDHS
IC401
LCD DRIVER
GVS
GHS
IC301
PW164B-10TK
SYSTEM
CONTROL
VVS
VHS
IC801
MBM29LV800TA90C147
IC811
IDT71V016S15PHTR;
IC61LV6416-15T
IC1351
HD74HCT244TV;
SN74HCT244PWR
MNTOUT_SW5
PC1/PC2_SW5
PC/AV_SW5
MUTE5
IC341
TC74LCX14FT;
HD74LVC14T
R/C
IC311
PST573IM
IC312
TC7W126FU
LAMP_POW
IC351
24LC32AT-I/SN
SERVICE
MEMORY
IC1361
TC7WBL126FK
MAIN-4/5



IC441
HD74HCT244TV;
SN74HCT244PWR
IC431
HD74HCT244TV;
SN74HCT244PWR
IC421
TC74LCX125FT
5V_SW
POWER_FAIL
IC301
SYSTEM
CONTROL
IC401
CXD3526GG
<TOP_VIEW>
IC411
TC74LCX125FT
LCD DRIVER
TIMMING
CONTROLLER
DHS
DVS
DCLK
IC402
BD4826G
IC1481
24LC256T-I/SN
IC3561
M62392FP
D/A
VOL_CTL
IC501
CXA7000R
B-D/A & S/H
IC1501
CXA7000R
B-D/A & S/H
IC531
CXA7000R
G-D/A & S/H
IC1531
CXA7000R
G-D/A & S/H
IC561
CXA7000R
R-D/A & S/H
IC1561
CXA7000R
R-D/A & S/H
IC3501
LT1206CS8-T2
PSIG DRIVER
IC3531
LT1206CS8-T2
PSIG DRIVER
TP501B
TP502B
TP3501
TP503G
TP504G
TP3531
TP505R
TP506R
B-PANEL
G-PANEL
R-PANEL
POWER_FAIL
MAIN-5/5

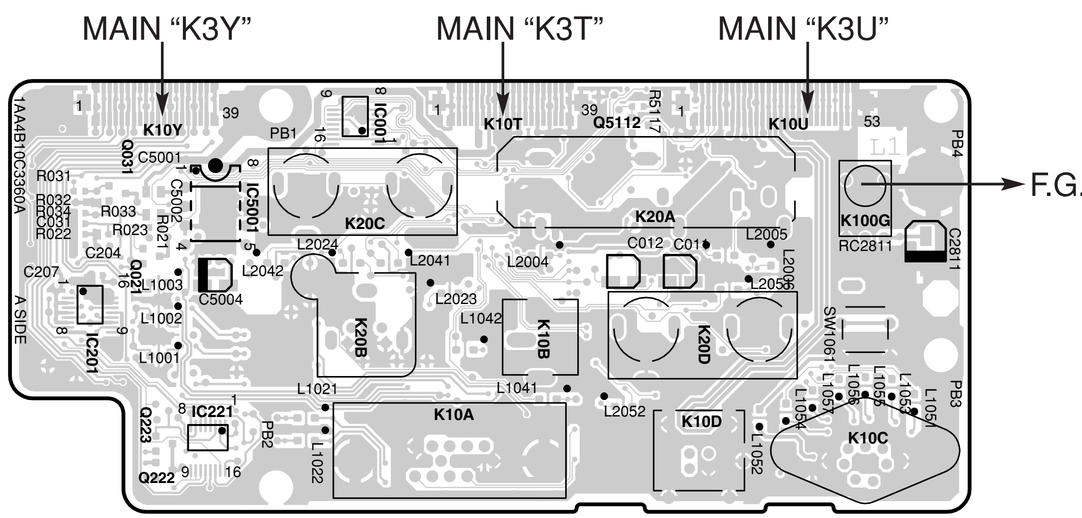
A10

SCH_MA3A

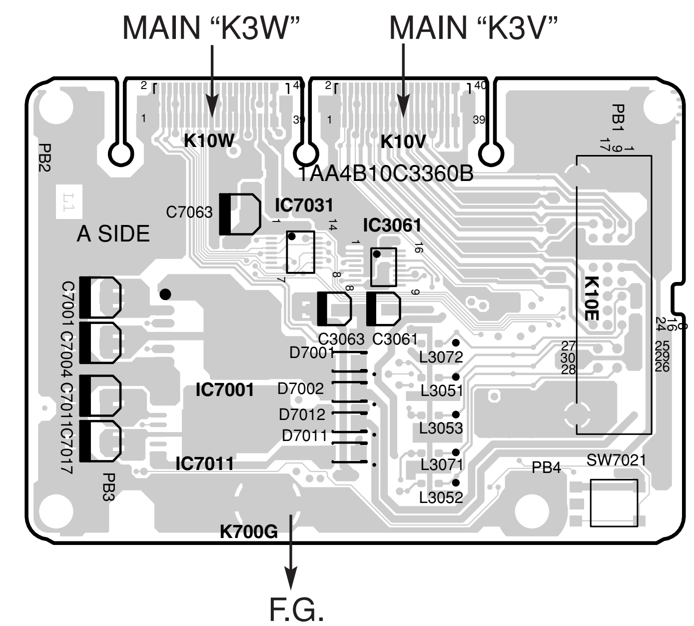
■ Printed Wiring Board Diagrams

⚠ CAUTION
This projector is isolated from AC line by using the internal converter transformer. Please pay attention to the following notes in servicing 1. Do not touch the part on hot side (primary circuit) or both parts on hot and cold sides (secondary circuit) at the same time. 2. Do not shorten the circuit between hot and cold sides. 3. The grounding lead must be connected to the ground of the same circuit when measuring of voltages and waveforms.

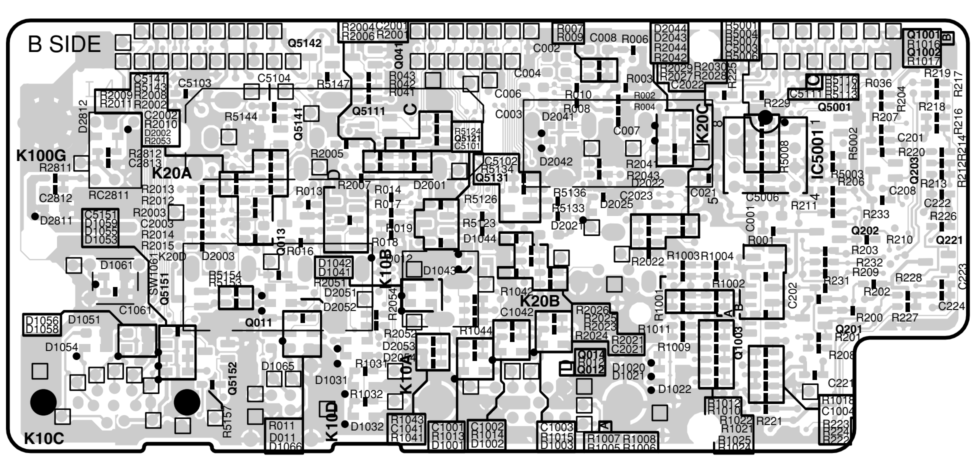
AV (SIDE:A)



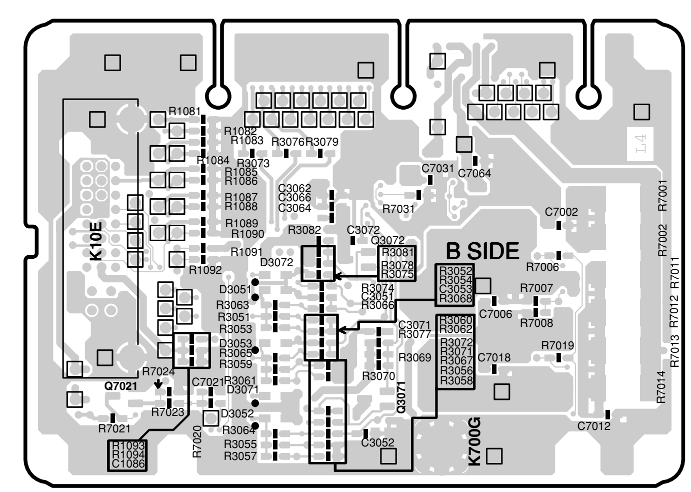
DVI (SIDE:A)



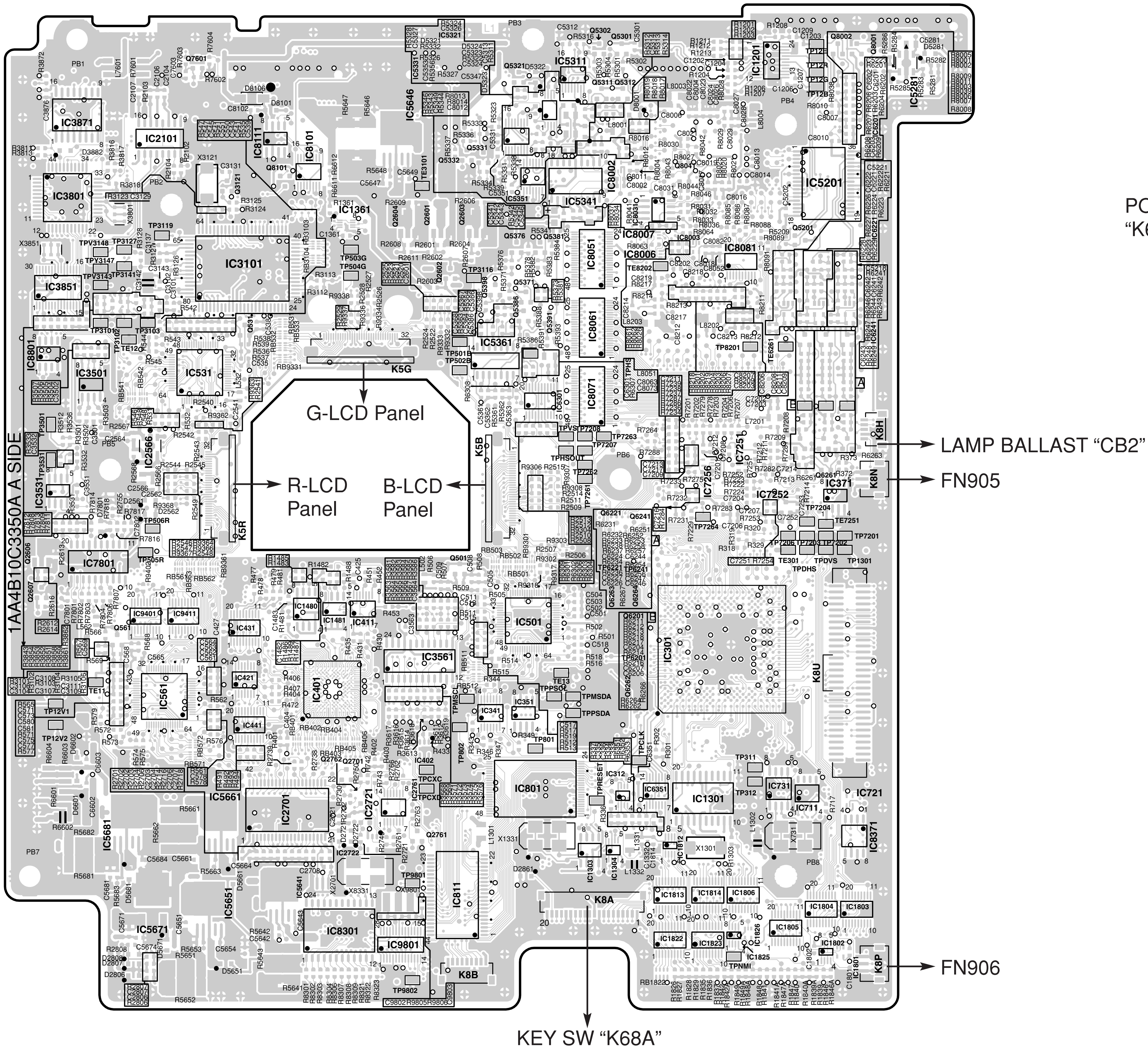
AV (SIDE:B)



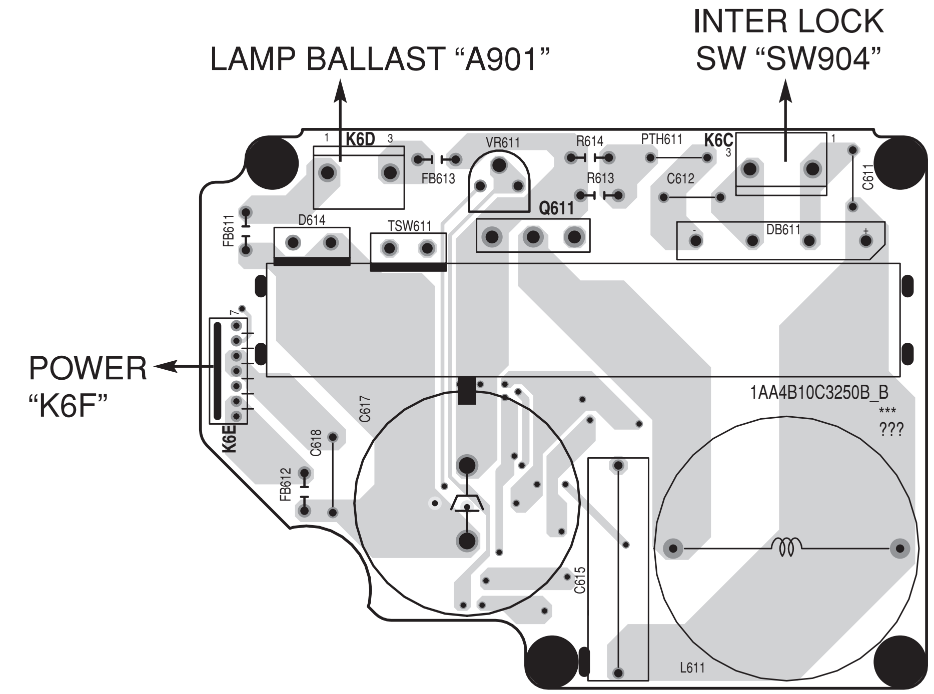
DVI (SIDE:B)



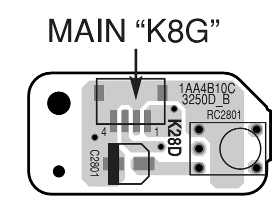
MAIN (SIDE:A)



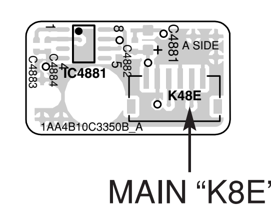
P.F (SIDE:A)



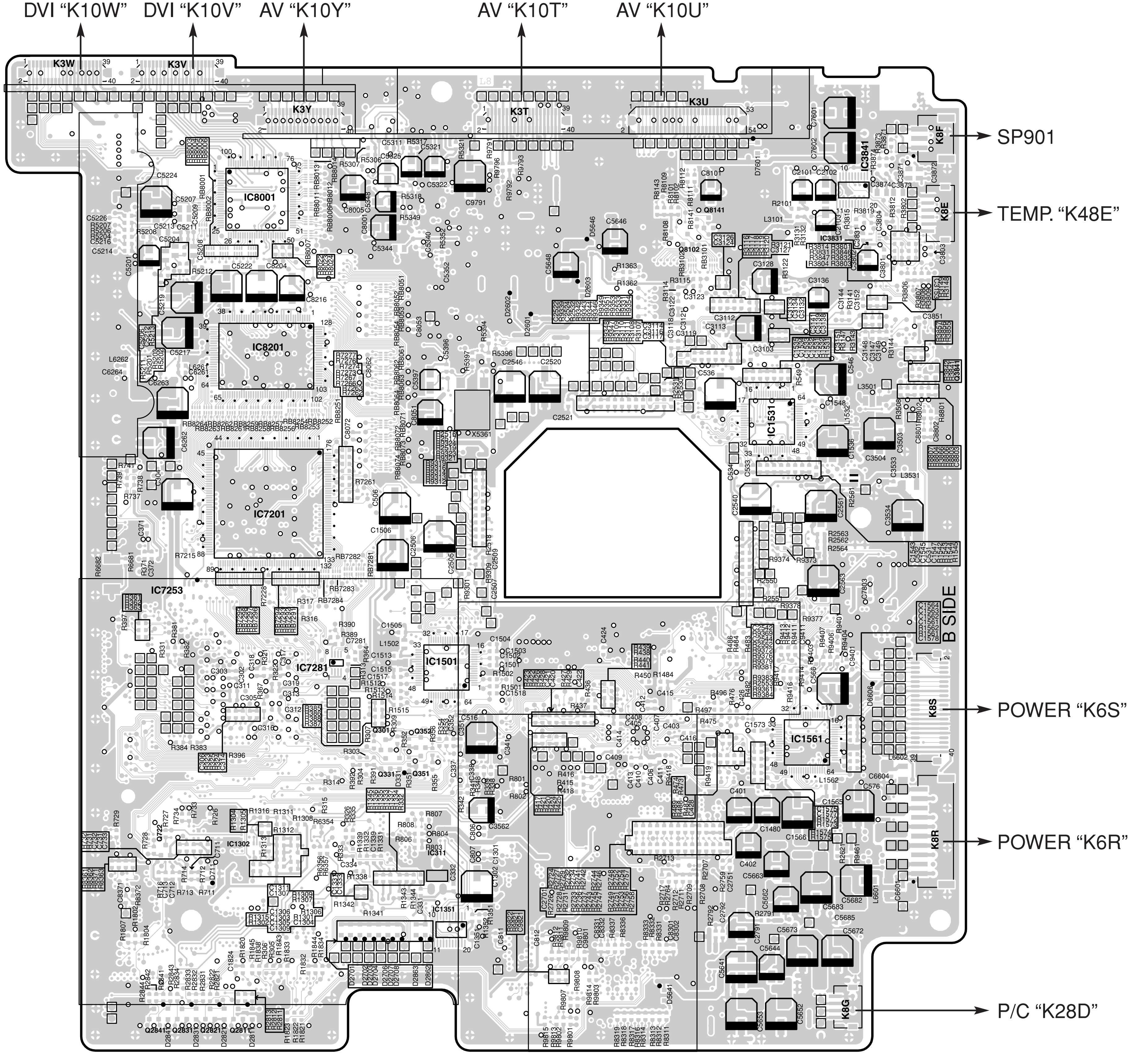
R/C (SIDE:A)



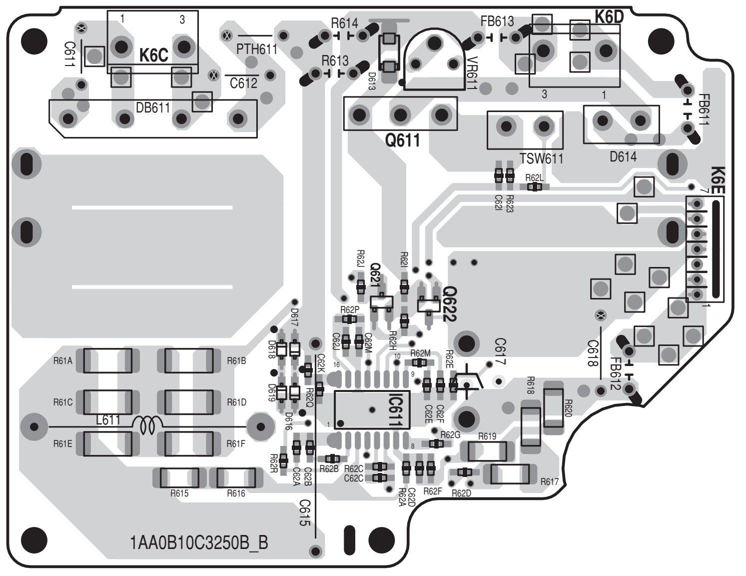
TEMP (SIDE:A)



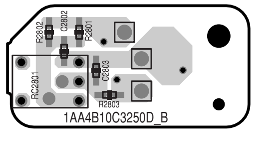
MAIN (SIDE:B)



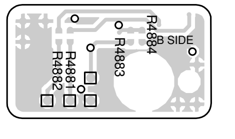
P.F (SIDE:B)



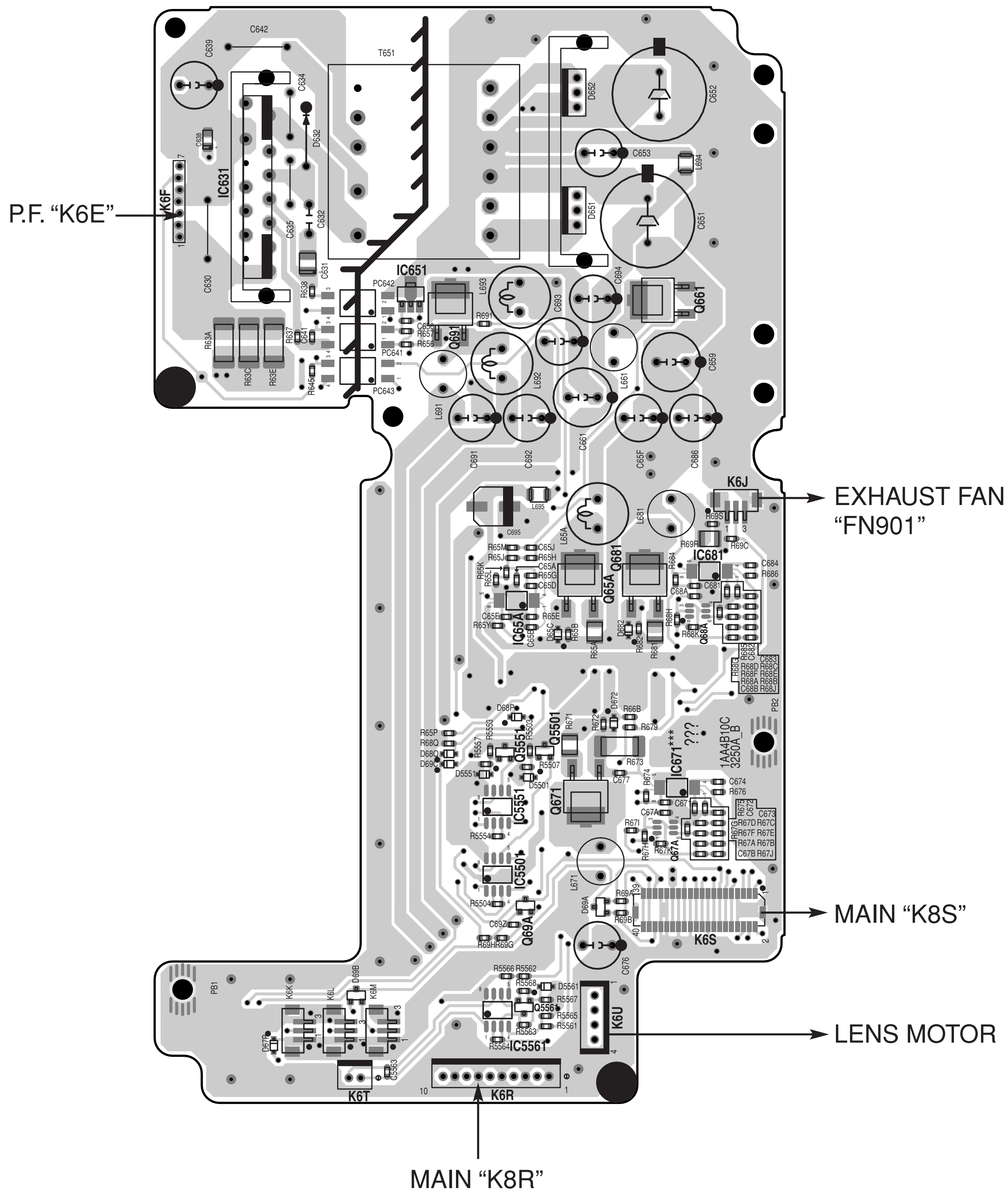
R/C (SIDE:B)



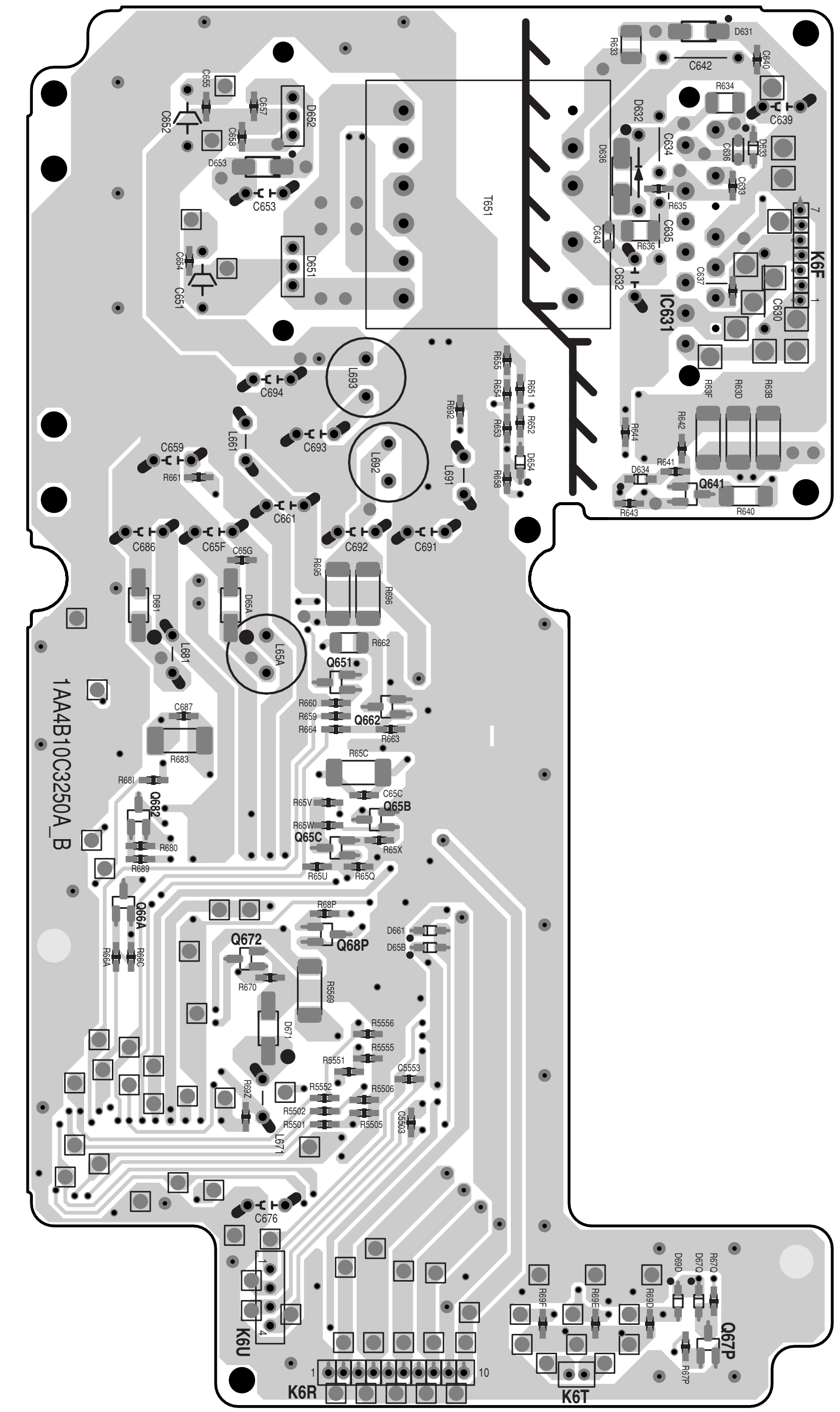
TEMP (SIDE:B)



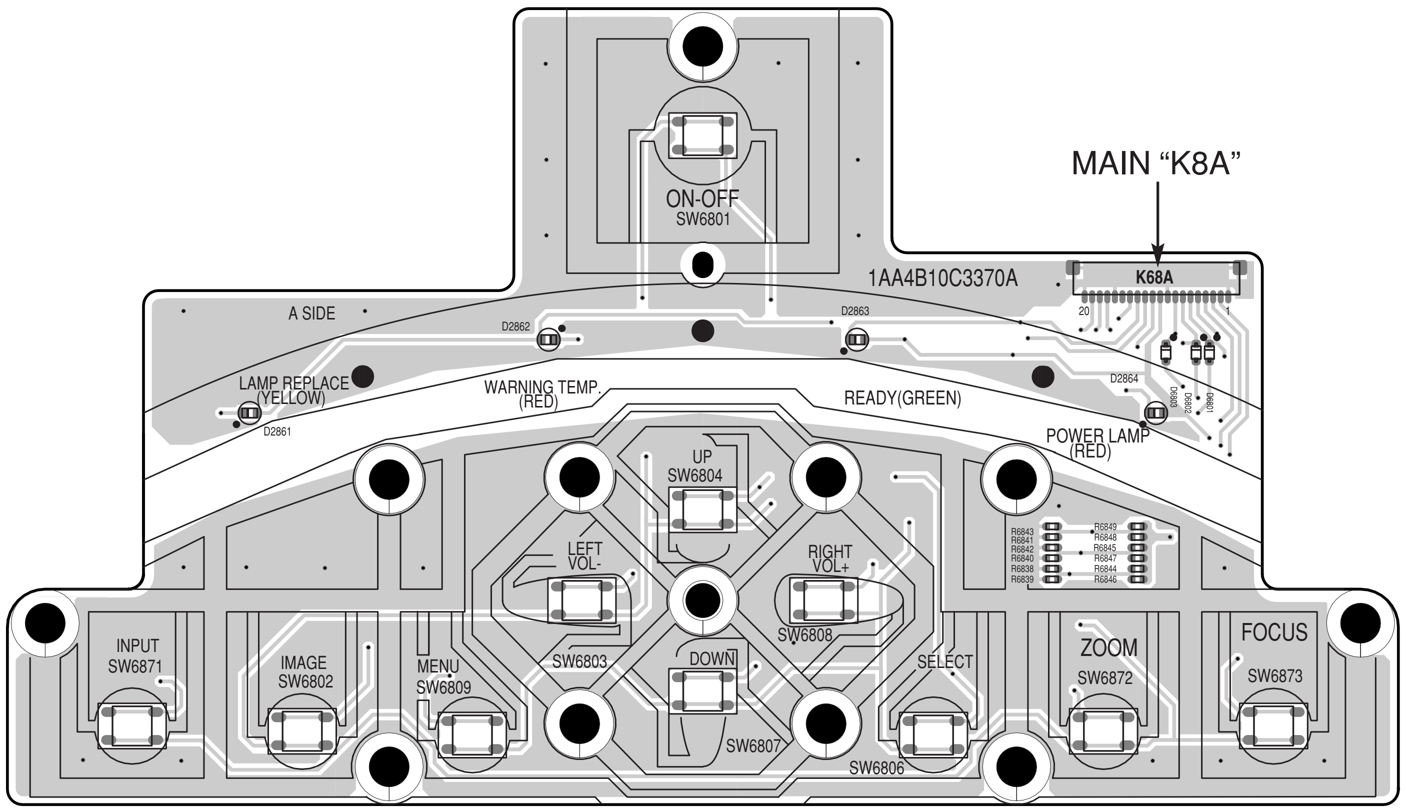
POWER (SIDE:A)



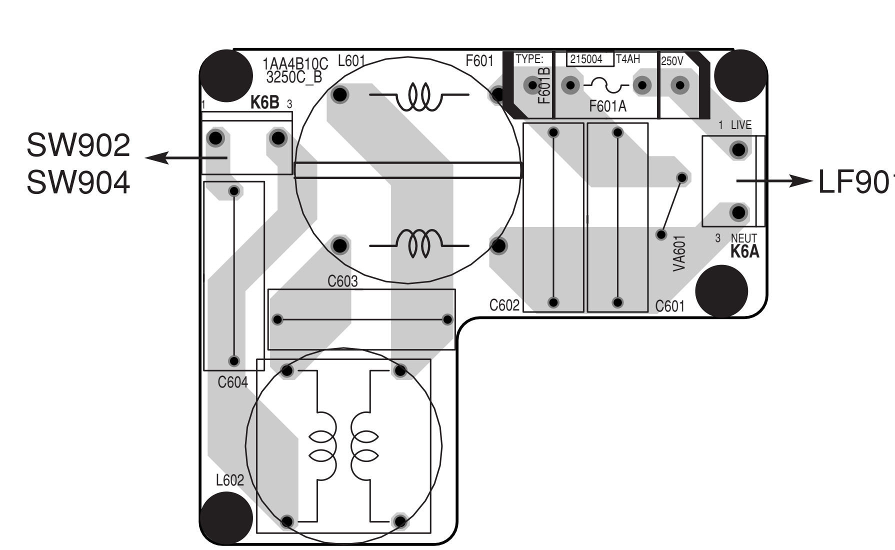
POWER (SIDE:B)



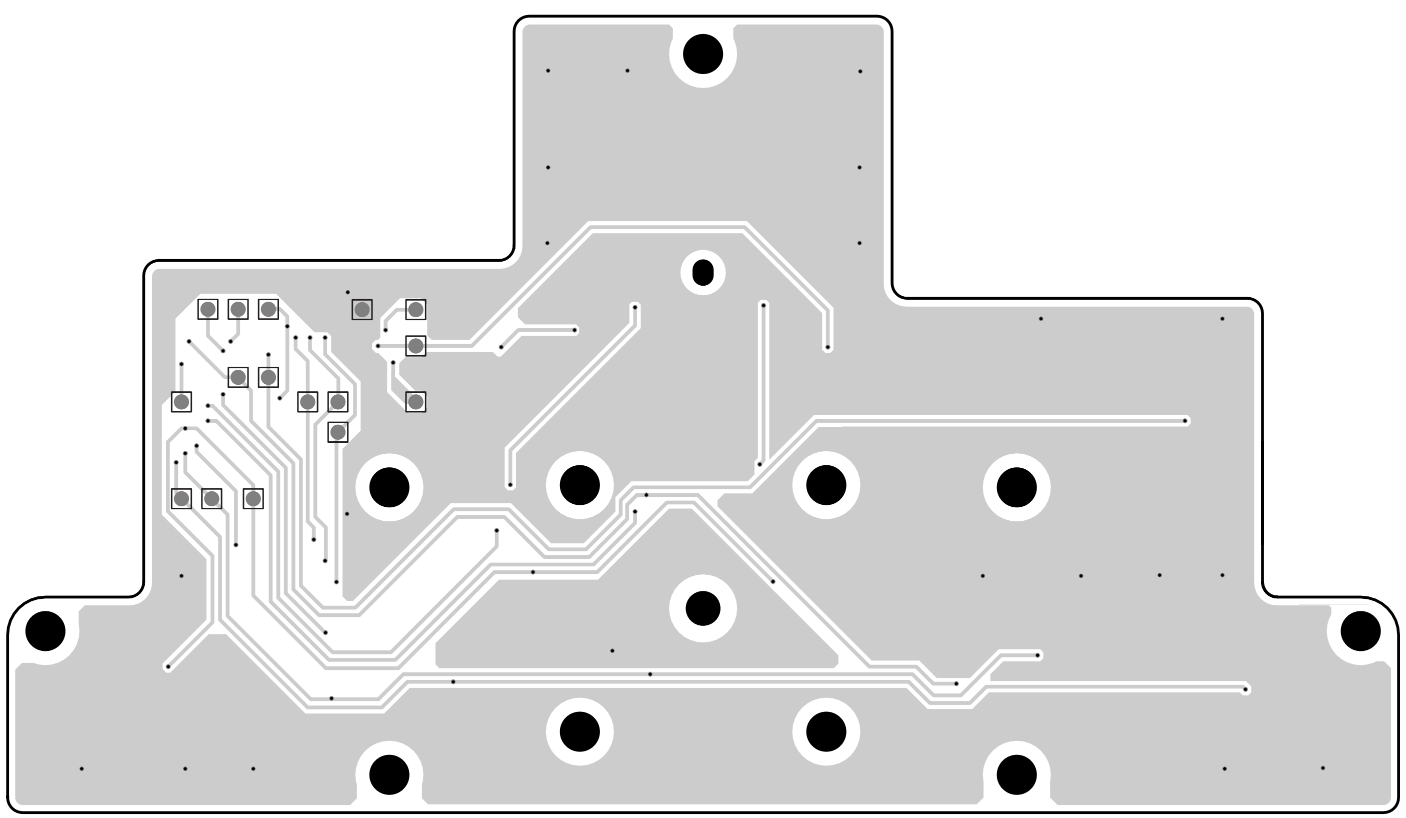
KEY SW (SIDE:A)



LINE FILTER (SIDE:A)



KEY SW (SIDE:B)



LINE FILTER (SIDE:B)

